

Pantheon Report

Generated at 2018-06-29 20:24:43 (UTC).

Data path: AWS India 1 Ethernet (*local*) → India ppp0 ppp0 (*remote*).

Repeated the test of 17 congestion control schemes 3 times.

Each test lasted for 30 seconds running 3 flows with 10-second interval between two flows.

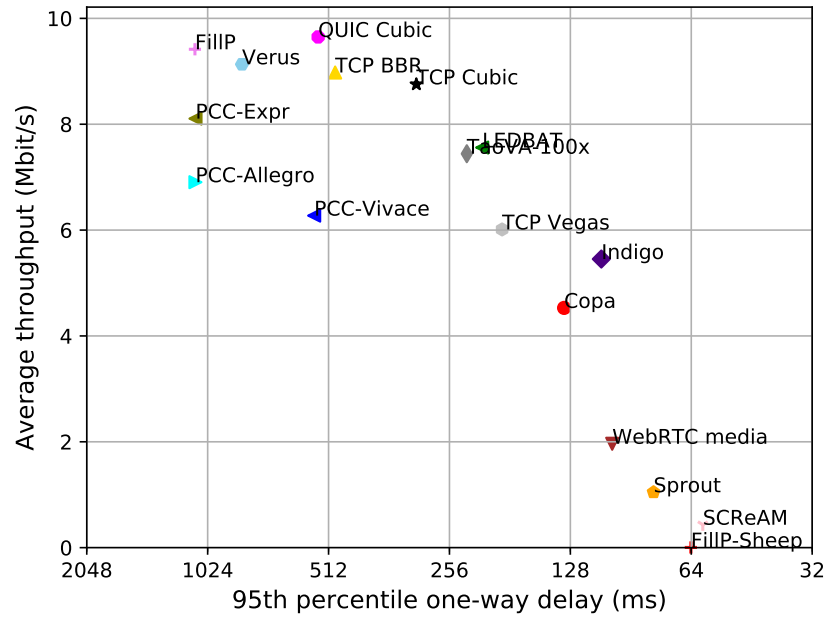
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

NTP offsets were measured against `nets.org.sg` and have been applied to correct the timestamps in logs.

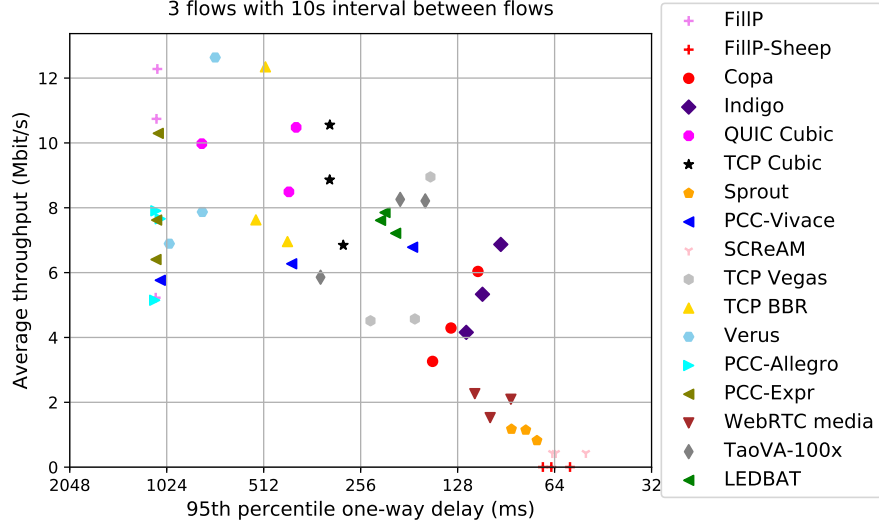
Git summary:

```
branch: master @ 715dc5f09d172e419699f6f17f1cb4c45064f212
third_party/fillp @ d47f4fa1b454a5e3c0537115c5a28436dbd4b834
third_party/fillp-sheep @ 30060ab034deb3424347f5cc3db86198eac35d2a
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ 6f038ed31259d366f9840f65b82cbe8f464b1b39
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-quirk @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2
M src/ScreamClient
M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
M src/verus.hpp
M tools/plot.py
third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webRTC @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851
```

test from AWS India 1 to India ppp0, 3 runs of 30s each per scheme
 3 flows with 10s interval between flows (mean of all runs by scheme)



test from AWS India 1 to India ppp0, 3 runs of 30s each per scheme
 3 flows with 10s interval between flows



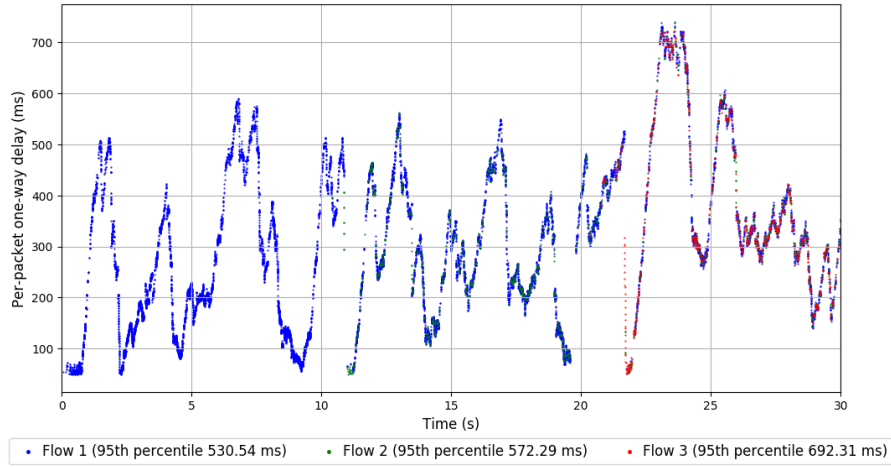
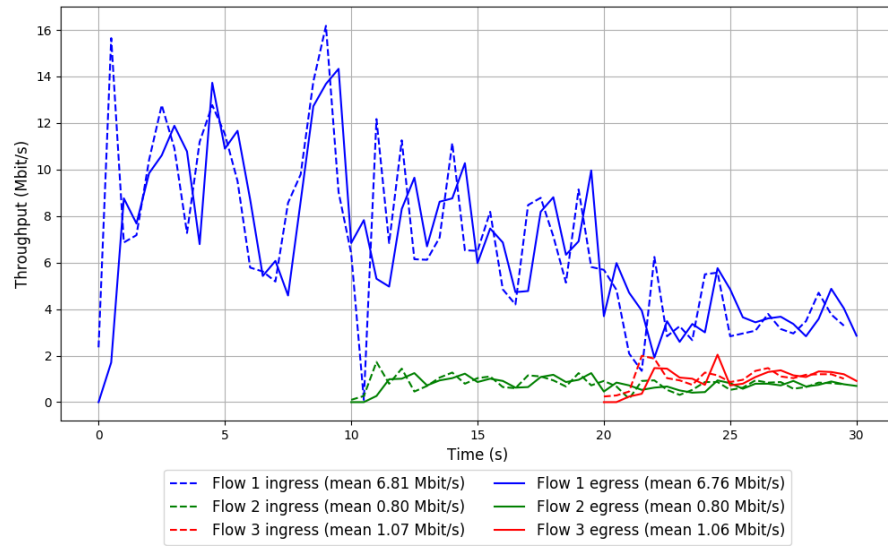
scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	3	6.68	1.90	3.22	487.98	489.20	549.08	0.85	1.26	2.58
Copa	3	2.39	2.08	2.27	116.68	142.09	155.27	0.37	0.70	0.74
TCP Cubic	3	5.89	2.88	2.90	299.85	342.32	333.90	0.36	1.03	2.10
FillP	3	8.09	1.06	2.19	1100.58	1100.51	1107.62	46.96	35.67	61.10
FillP-Sheep	3	0.00	0.00	0.00	62.02	64.04	62.81	0.00	0.00	1.33
Indigo	3	2.93	2.31	3.05	99.43	121.37	106.11	0.08	0.26	0.27
LEDBAT	3	4.83	3.31	1.62	210.23	212.71	216.83	0.46	0.81	1.37
PCC-Allegro	3	4.27	3.03	2.02	1085.15	1094.99	1225.55	20.65	31.23	71.69
PCC-Expr	3	4.43	4.22	2.87	1086.72	1101.46	1112.50	25.17	41.19	62.10
QUIC Cubic	3	6.73	3.16	2.64	464.93	582.73	624.90	0.78	1.40	4.23
SCReAM	3	0.22	0.22	0.22	59.78	63.79	56.41	0.13	0.19	0.35
Sprout	3	0.63	0.40	0.45	80.88	79.09	79.03	0.09	0.23	0.17
TaoVA-100x	3	3.95	3.71	3.12	184.03	204.52	381.20	0.26	0.50	1.13
TCP Vegas	3	3.01	2.55	3.93	165.03	192.75	263.26	0.18	0.27	0.56
Verus	3	5.93	4.30	1.14	826.50	868.62	803.17	2.77	4.12	4.72
PCC-Vivace	3	4.07	2.17	2.31	544.62	509.48	661.48	2.12	2.52	5.71
WebRTC media	3	1.17	0.48	0.32	86.56	121.06	111.38	0.06	0.14	0.68

Run 1: Statistics of TCP BBR

Start at: 2018-06-29 19:45:28
End at: 2018-06-29 19:45:58
Local clock offset: 1.309 ms
Remote clock offset: -3.807 ms

Below is generated by plot.py at 2018-06-29 20:23:42
Datalink statistics
-- Total of 3 flows:
Average throughput: 7.63 Mbit/s
95th percentile per-packet one-way delay: 541.342 ms
Loss rate: 1.03%
-- Flow 1:
Average throughput: 6.76 Mbit/s
95th percentile per-packet one-way delay: 530.539 ms
Loss rate: 0.83%
-- Flow 2:
Average throughput: 0.80 Mbit/s
95th percentile per-packet one-way delay: 572.292 ms
Loss rate: 1.95%
-- Flow 3:
Average throughput: 1.06 Mbit/s
95th percentile per-packet one-way delay: 692.312 ms
Loss rate: 3.60%

Run 1: Report of TCP BBR — Data Link

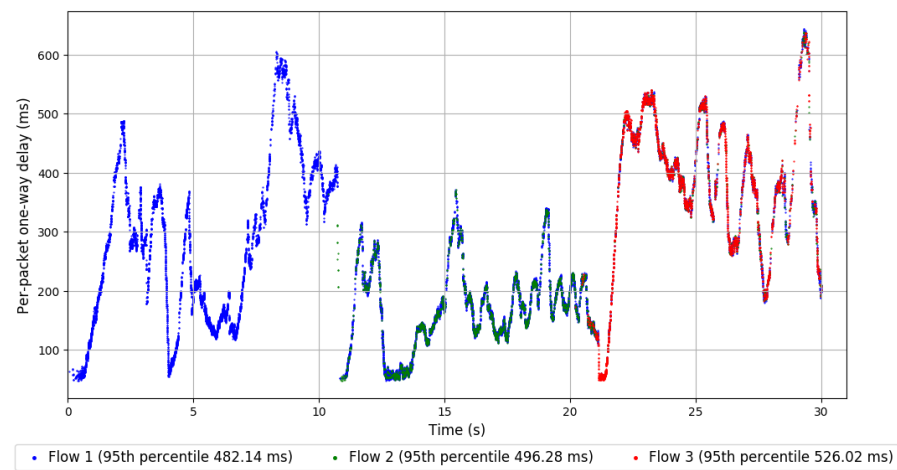
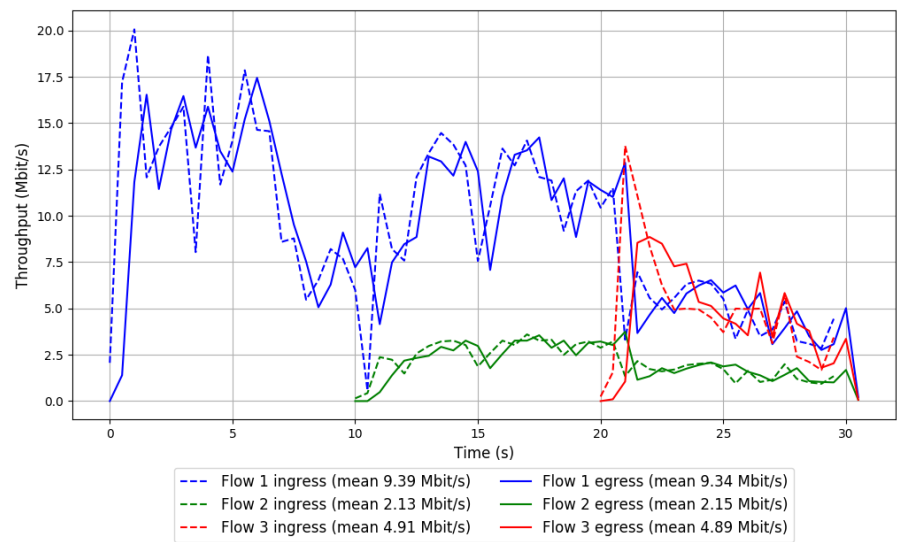


Run 2: Statistics of TCP BBR

Start at: 2018-06-29 20:04:09
End at: 2018-06-29 20:04:39
Local clock offset: 0.366 ms
Remote clock offset: -7.499 ms

Below is generated by plot.py at 2018-06-29 20:23:49
Datalink statistics
-- Total of 3 flows:
Average throughput: 12.35 Mbit/s
95th percentile per-packet one-way delay: 505.743 ms
Loss rate: 0.91%
-- Flow 1:
Average throughput: 9.34 Mbit/s
95th percentile per-packet one-way delay: 482.139 ms
Loss rate: 0.74%
-- Flow 2:
Average throughput: 2.15 Mbit/s
95th percentile per-packet one-way delay: 496.278 ms
Loss rate: 0.79%
-- Flow 3:
Average throughput: 4.89 Mbit/s
95th percentile per-packet one-way delay: 526.024 ms
Loss rate: 2.01%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2018-06-29 20:22:53

End at: 2018-06-29 20:23:23

Local clock offset: 1.436 ms

Remote clock offset: -2.41 ms

Below is generated by plot.py at 2018-06-29 20:23:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 6.96 Mbit/s

95th percentile per-packet one-way delay: 431.914 ms

Loss rate: 1.20%

-- Flow 1:

Average throughput: 3.94 Mbit/s

95th percentile per-packet one-way delay: 451.263 ms

Loss rate: 0.98%

-- Flow 2:

Average throughput: 2.74 Mbit/s

95th percentile per-packet one-way delay: 399.043 ms

Loss rate: 1.03%

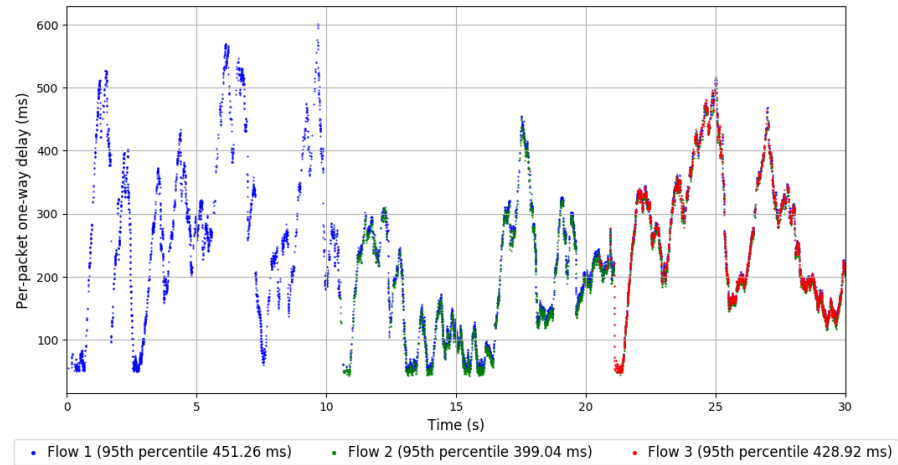
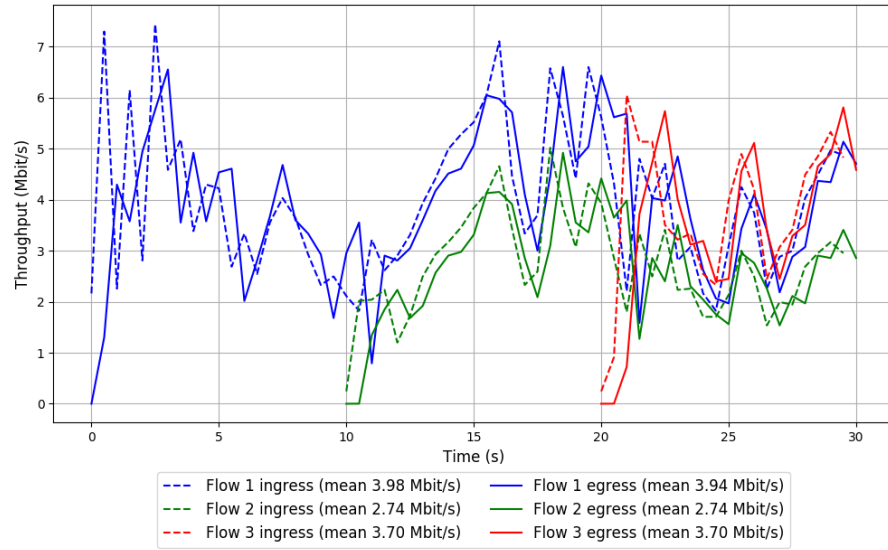
-- Flow 3:

Average throughput: 3.70 Mbit/s

95th percentile per-packet one-way delay: 428.918 ms

Loss rate: 2.14%

Run 3: Report of TCP BBR — Data Link

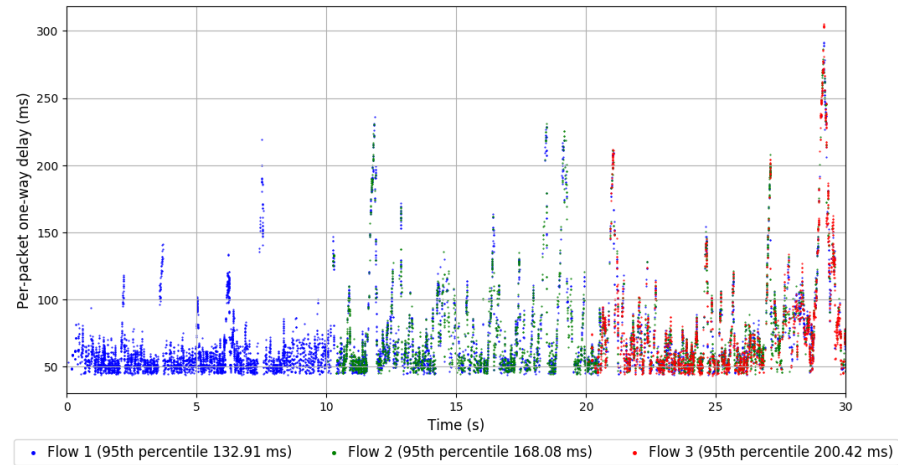
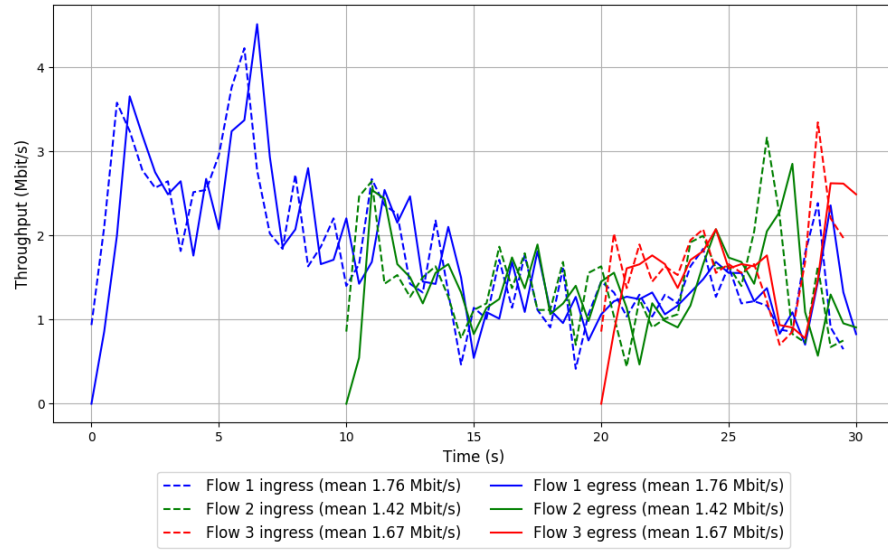


Run 1: Statistics of Copa

Start at: 2018-06-29 19:27:54
End at: 2018-06-29 19:28:24
Local clock offset: 0.019 ms
Remote clock offset: -2.334 ms

Below is generated by plot.py at 2018-06-29 20:23:49
Datalink statistics
-- Total of 3 flows:
Average throughput: 3.26 Mbit/s
95th percentile per-packet one-way delay: 153.095 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 1.76 Mbit/s
95th percentile per-packet one-way delay: 132.907 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 1.42 Mbit/s
95th percentile per-packet one-way delay: 168.080 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 1.67 Mbit/s
95th percentile per-packet one-way delay: 200.419 ms
Loss rate: 0.55%

Run 1: Report of Copa — Data Link

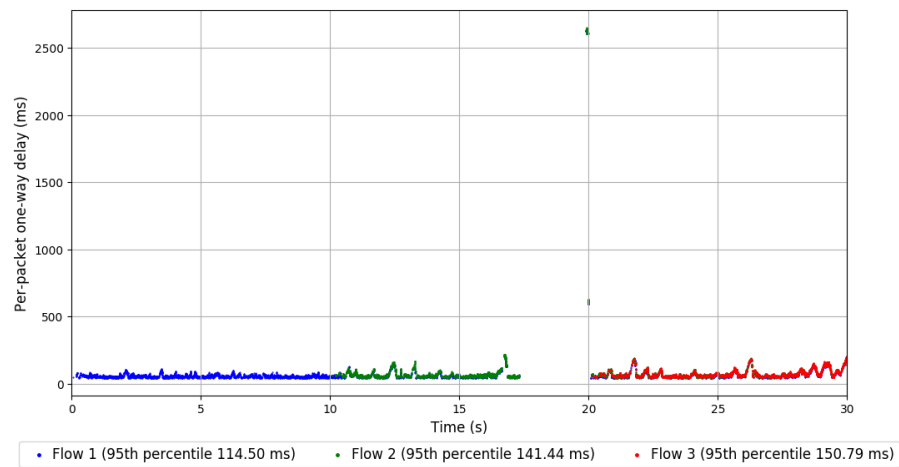
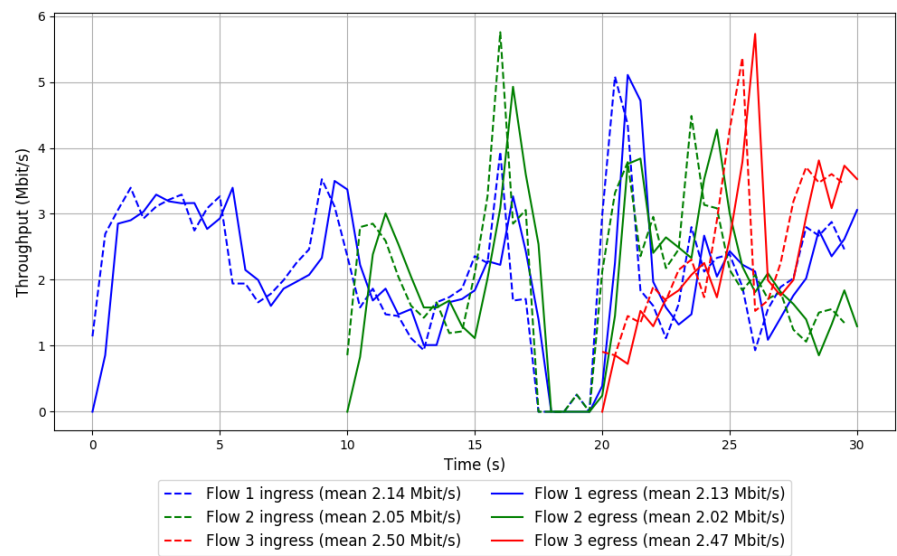


Run 2: Statistics of Copa

Start at: 2018-06-29 19:46:34
End at: 2018-06-29 19:47:04
Local clock offset: 2.972 ms
Remote clock offset: -4.327 ms

Below is generated by plot.py at 2018-06-29 20:23:49
Datalink statistics
-- Total of 3 flows:
Average throughput: 4.29 Mbit/s
95th percentile per-packet one-way delay: 134.217 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 2.13 Mbit/s
95th percentile per-packet one-way delay: 114.495 ms
Loss rate: 0.58%
-- Flow 2:
Average throughput: 2.02 Mbit/s
95th percentile per-packet one-way delay: 141.440 ms
Loss rate: 1.51%
-- Flow 3:
Average throughput: 2.47 Mbit/s
95th percentile per-packet one-way delay: 150.792 ms
Loss rate: 1.51%

Run 2: Report of Copa — Data Link

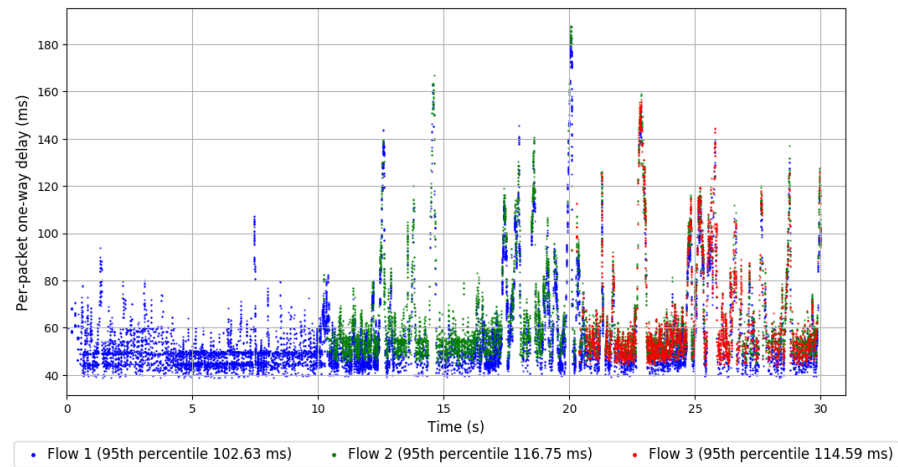
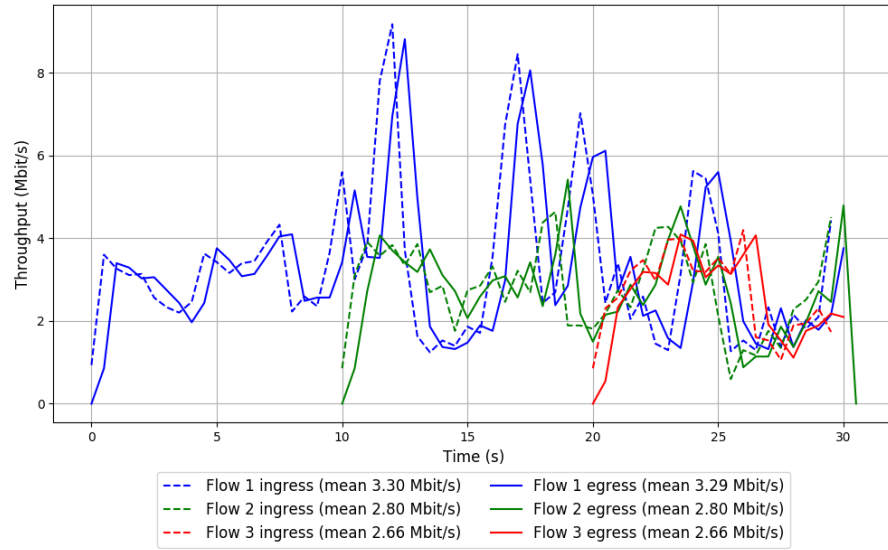


Run 3: Statistics of Copa

Start at: 2018-06-29 20:05:15
End at: 2018-06-29 20:05:45
Local clock offset: 2.923 ms
Remote clock offset: -7.695 ms

Below is generated by plot.py at 2018-06-29 20:23:49
Datalink statistics
-- Total of 3 flows:
Average throughput: 6.04 Mbit/s
95th percentile per-packet one-way delay: 110.707 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 3.29 Mbit/s
95th percentile per-packet one-way delay: 102.626 ms
Loss rate: 0.47%
-- Flow 2:
Average throughput: 2.80 Mbit/s
95th percentile per-packet one-way delay: 116.755 ms
Loss rate: 0.39%
-- Flow 3:
Average throughput: 2.66 Mbit/s
95th percentile per-packet one-way delay: 114.592 ms
Loss rate: 0.15%

Run 3: Report of Copa — Data Link

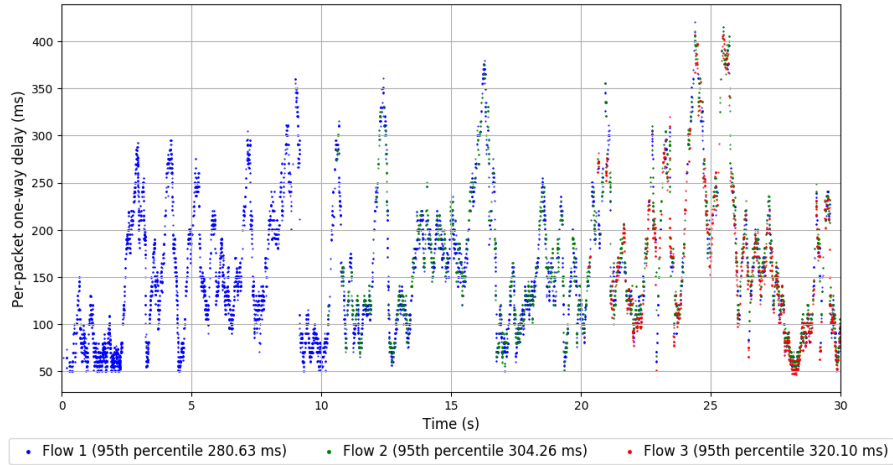
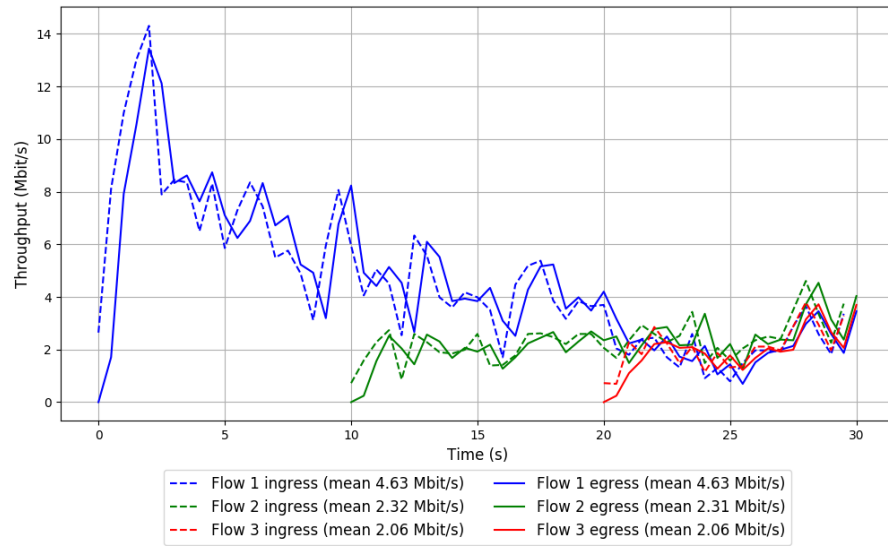


Run 1: Statistics of TCP Cubic

Start at: 2018-06-29 19:44:22
End at: 2018-06-29 19:44:52
Local clock offset: 2.774 ms
Remote clock offset: -2.016 ms

Below is generated by plot.py at 2018-06-29 20:23:49
Datalink statistics
-- Total of 3 flows:
Average throughput: 6.85 Mbit/s
95th percentile per-packet one-way delay: 289.870 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 4.63 Mbit/s
95th percentile per-packet one-way delay: 280.632 ms
Loss rate: 0.27%
-- Flow 2:
Average throughput: 2.31 Mbit/s
95th percentile per-packet one-way delay: 304.258 ms
Loss rate: 0.83%
-- Flow 3:
Average throughput: 2.06 Mbit/s
95th percentile per-packet one-way delay: 320.101 ms
Loss rate: 0.94%

Run 1: Report of TCP Cubic — Data Link

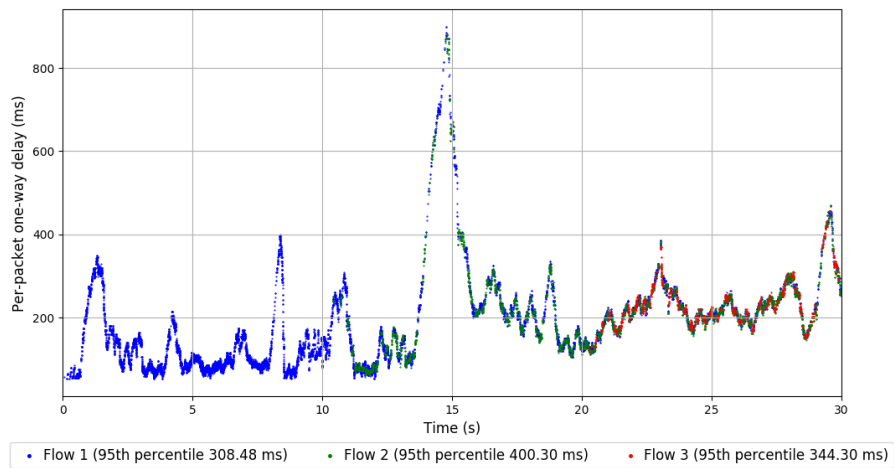
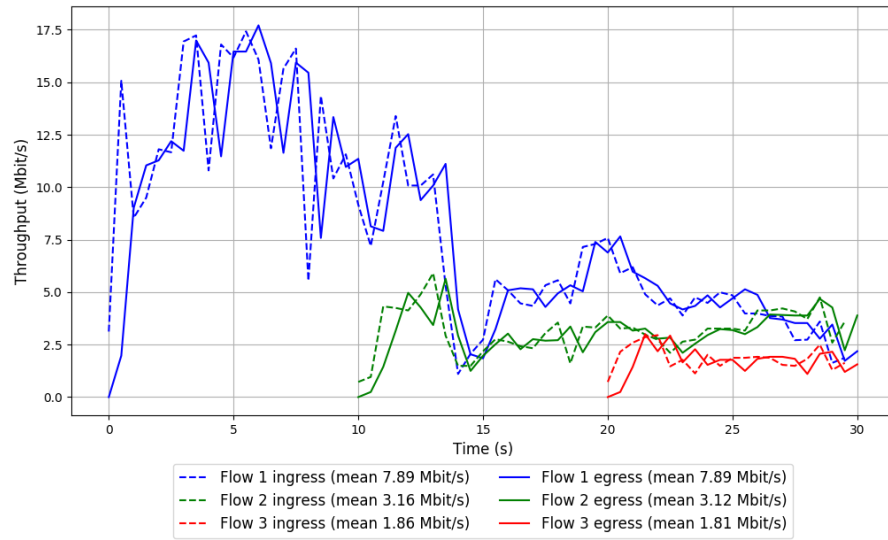


Run 2: Statistics of TCP Cubic

Start at: 2018-06-29 20:03:03
End at: 2018-06-29 20:03:33
Local clock offset: -2.104 ms
Remote clock offset: -7.321 ms

Below is generated by plot.py at 2018-06-29 20:23:49
Datalink statistics
-- Total of 3 flows:
Average throughput: 10.55 Mbit/s
95th percentile per-packet one-way delay: 319.127 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 7.89 Mbit/s
95th percentile per-packet one-way delay: 308.481 ms
Loss rate: 0.23%
-- Flow 2:
Average throughput: 3.12 Mbit/s
95th percentile per-packet one-way delay: 400.303 ms
Loss rate: 1.58%
-- Flow 3:
Average throughput: 1.81 Mbit/s
95th percentile per-packet one-way delay: 344.298 ms
Loss rate: 3.57%

Run 2: Report of TCP Cubic — Data Link

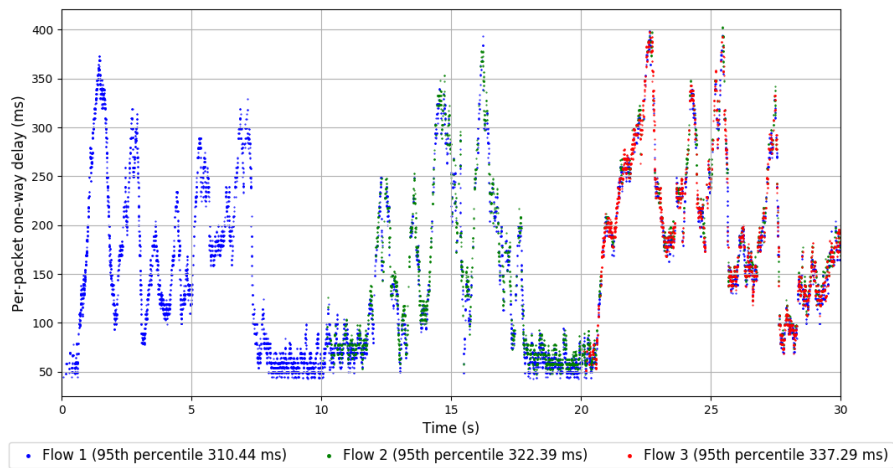
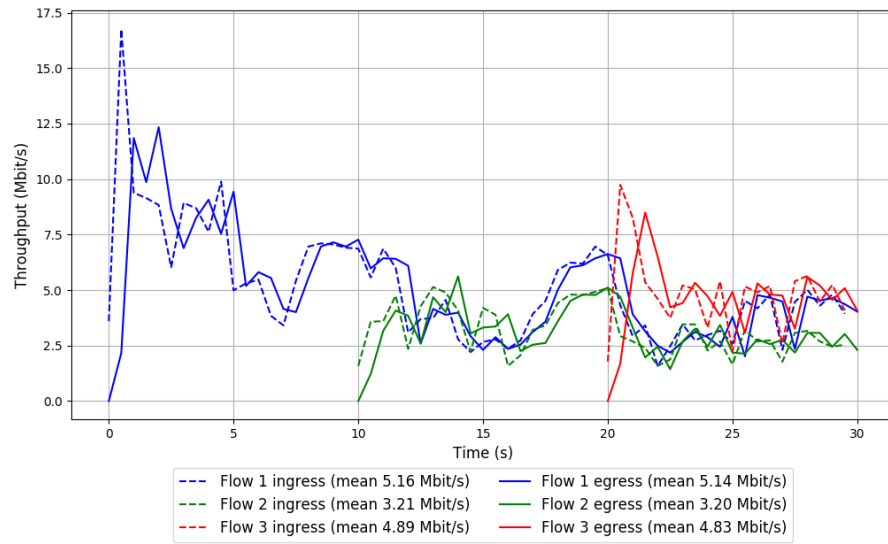


Run 3: Statistics of TCP Cubic

Start at: 2018-06-29 20:21:48
End at: 2018-06-29 20:22:18
Local clock offset: 0.18 ms
Remote clock offset: -3.493 ms

Below is generated by plot.py at 2018-06-29 20:23:53
Datalink statistics
-- Total of 3 flows:
Average throughput: 8.86 Mbit/s
95th percentile per-packet one-way delay: 319.510 ms
Loss rate: 0.83%
-- Flow 1:
Average throughput: 5.14 Mbit/s
95th percentile per-packet one-way delay: 310.437 ms
Loss rate: 0.58%
-- Flow 2:
Average throughput: 3.20 Mbit/s
95th percentile per-packet one-way delay: 322.392 ms
Loss rate: 0.69%
-- Flow 3:
Average throughput: 4.83 Mbit/s
95th percentile per-packet one-way delay: 337.294 ms
Loss rate: 1.78%

Run 3: Report of TCP Cubic — Data Link

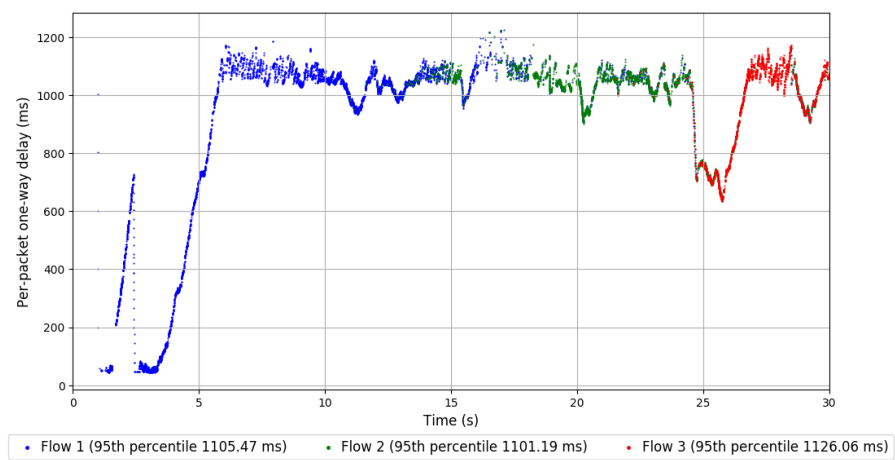
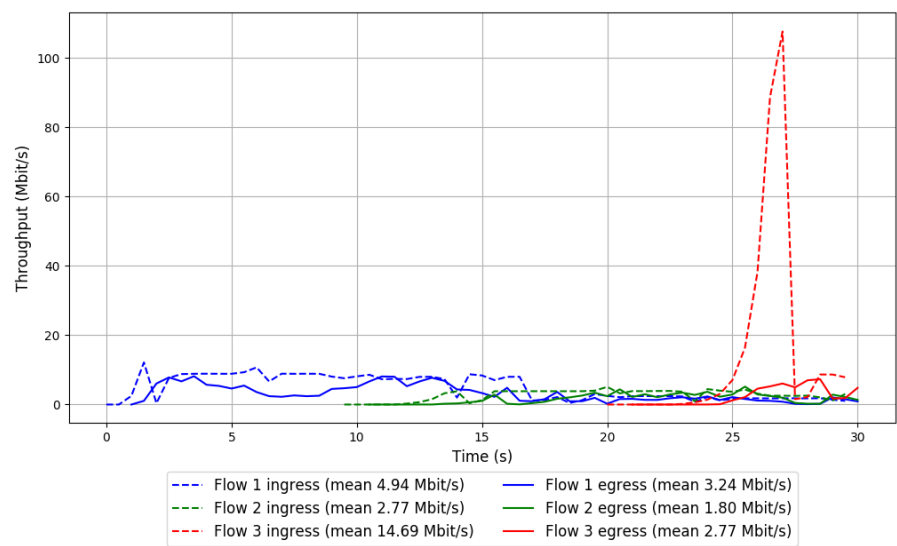


Run 1: Statistics of FillP

Start at: 2018-06-29 19:41:04
End at: 2018-06-29 19:41:34
Local clock offset: 2.964 ms
Remote clock offset: -3.731 ms

Below is generated by plot.py at 2018-06-29 20:23:54
Datalink statistics
-- Total of 3 flows:
Average throughput: 5.23 Mbit/s
95th percentile per-packet one-way delay: 1107.773 ms
Loss rate: 56.68%
-- Flow 1:
Average throughput: 3.24 Mbit/s
95th percentile per-packet one-way delay: 1105.466 ms
Loss rate: 36.67%
-- Flow 2:
Average throughput: 1.80 Mbit/s
95th percentile per-packet one-way delay: 1101.194 ms
Loss rate: 38.33%
-- Flow 3:
Average throughput: 2.77 Mbit/s
95th percentile per-packet one-way delay: 1126.060 ms
Loss rate: 83.90%

Run 1: Report of FillP — Data Link

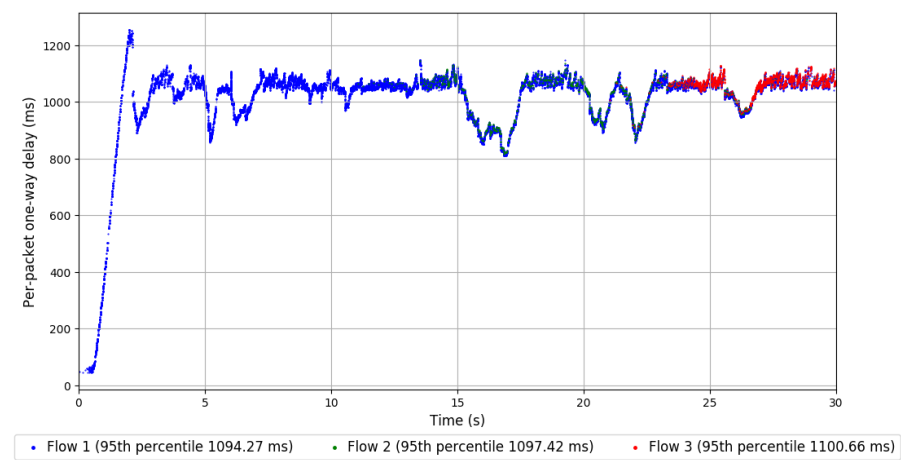
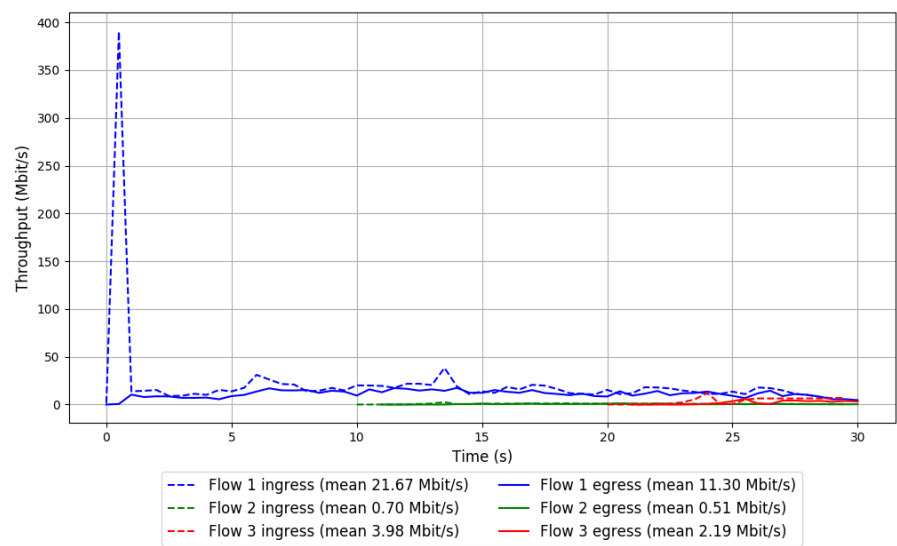


Run 2: Statistics of FillP

Start at: 2018-06-29 19:59:44
End at: 2018-06-29 20:00:14
Local clock offset: 1.202 ms
Remote clock offset: -6.225 ms

Below is generated by plot.py at 2018-06-29 20:24:05
Datalink statistics
-- Total of 3 flows:
Average throughput: 12.28 Mbit/s
95th percentile per-packet one-way delay: 1094.958 ms
Loss rate: 47.70%
-- Flow 1:
Average throughput: 11.30 Mbit/s
95th percentile per-packet one-way delay: 1094.270 ms
Loss rate: 47.90%
-- Flow 2:
Average throughput: 0.51 Mbit/s
95th percentile per-packet one-way delay: 1097.419 ms
Loss rate: 30.00%
-- Flow 3:
Average throughput: 2.19 Mbit/s
95th percentile per-packet one-way delay: 1100.661 ms
Loss rate: 50.60%

Run 2: Report of FillP — Data Link

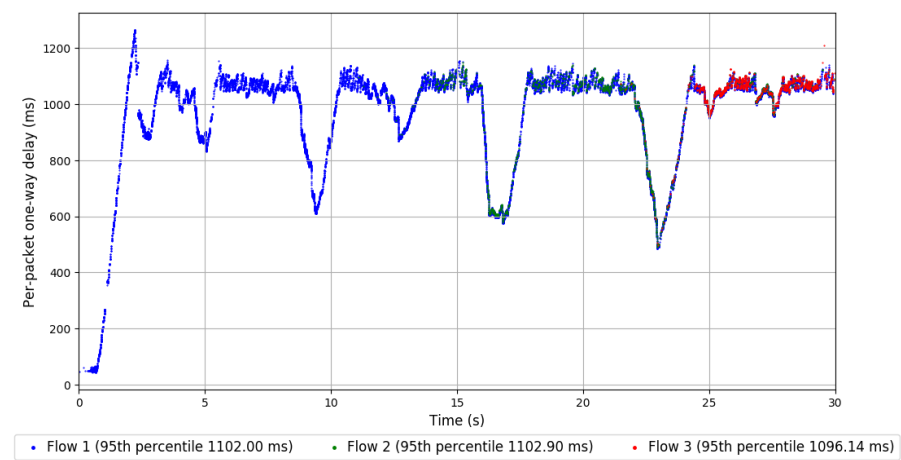
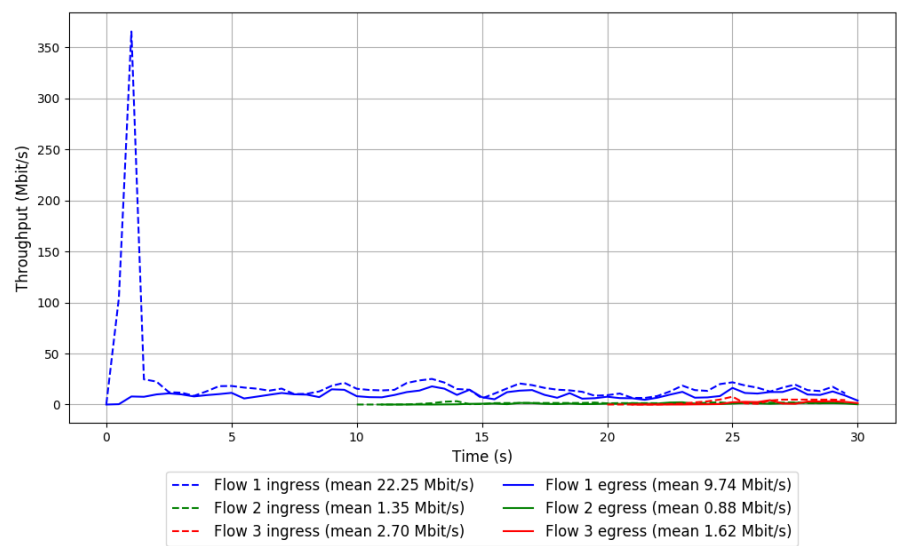


Run 3: Statistics of FillP

Start at: 2018-06-29 20:18:30
End at: 2018-06-29 20:19:00
Local clock offset: 1.992 ms
Remote clock offset: -5.386 ms

Below is generated by plot.py at 2018-06-29 20:24:05
Datalink statistics
-- Total of 3 flows:
Average throughput: 10.74 Mbit/s
95th percentile per-packet one-way delay: 1101.706 ms
Loss rate: 55.37%
-- Flow 1:
Average throughput: 9.74 Mbit/s
95th percentile per-packet one-way delay: 1101.997 ms
Loss rate: 56.31%
-- Flow 2:
Average throughput: 0.88 Mbit/s
95th percentile per-packet one-way delay: 1102.905 ms
Loss rate: 38.67%
-- Flow 3:
Average throughput: 1.62 Mbit/s
95th percentile per-packet one-way delay: 1096.145 ms
Loss rate: 48.79%

Run 3: Report of FillP — Data Link

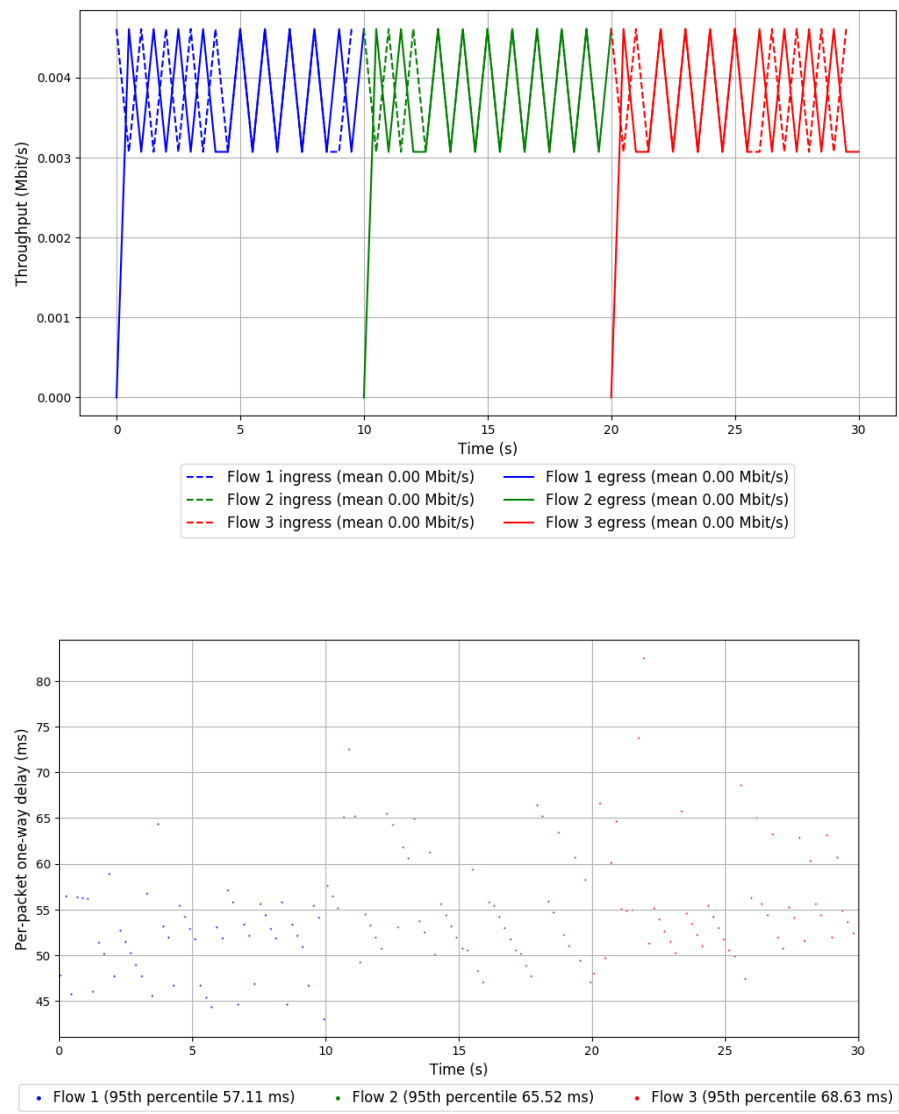


Run 1: Statistics of FillP-Sheep

Start at: 2018-06-29 19:30:06
End at: 2018-06-29 19:30:36
Local clock offset: -0.505 ms
Remote clock offset: -3.147 ms

Below is generated by plot.py at 2018-06-29 20:24:05
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 65.517 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 57.114 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 65.517 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 68.627 ms
Loss rate: 2.00%

Run 1: Report of FillP-Sheep — Data Link

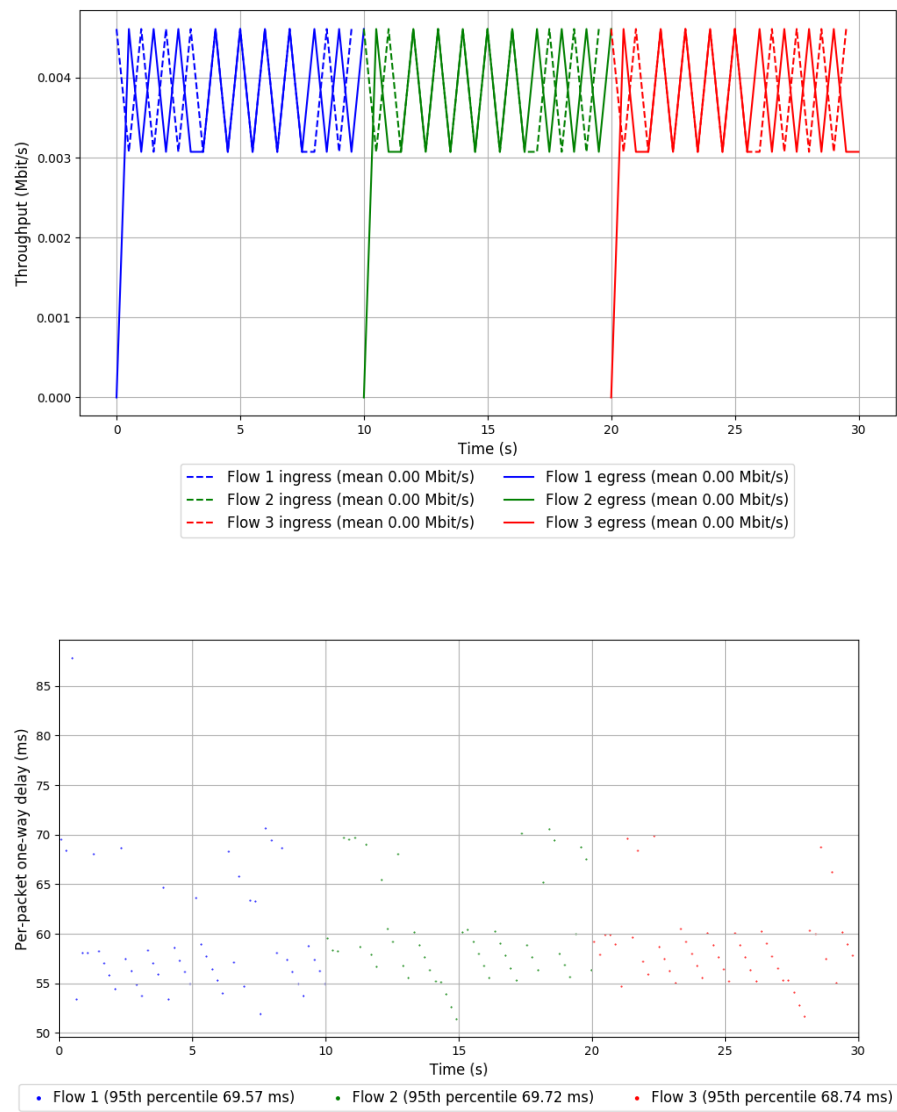


Run 2: Statistics of FillP-Sheep

Start at: 2018-06-29 19:48:46
End at: 2018-06-29 19:49:16
Local clock offset: -0.814 ms
Remote clock offset: -3.913 ms

Below is generated by plot.py at 2018-06-29 20:24:05
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 69.596 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 69.572 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 69.715 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 68.737 ms
Loss rate: 2.00%

Run 2: Report of FillP-Sheep — Data Link

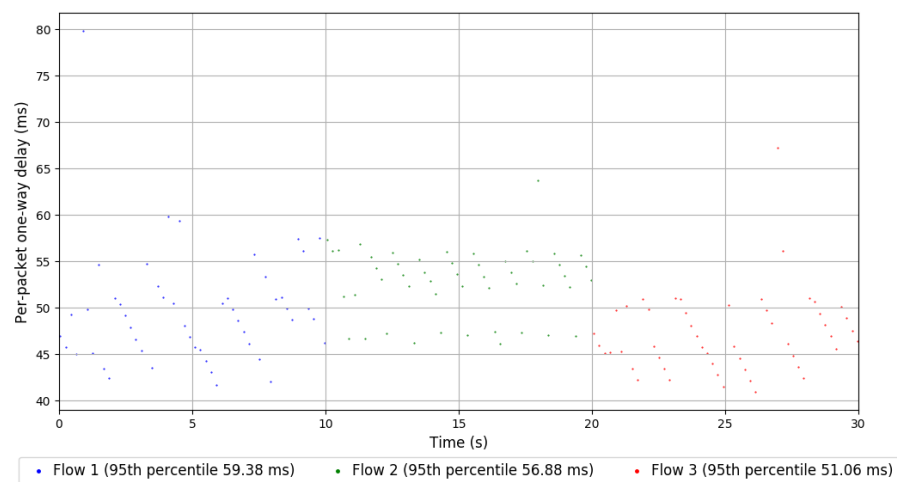
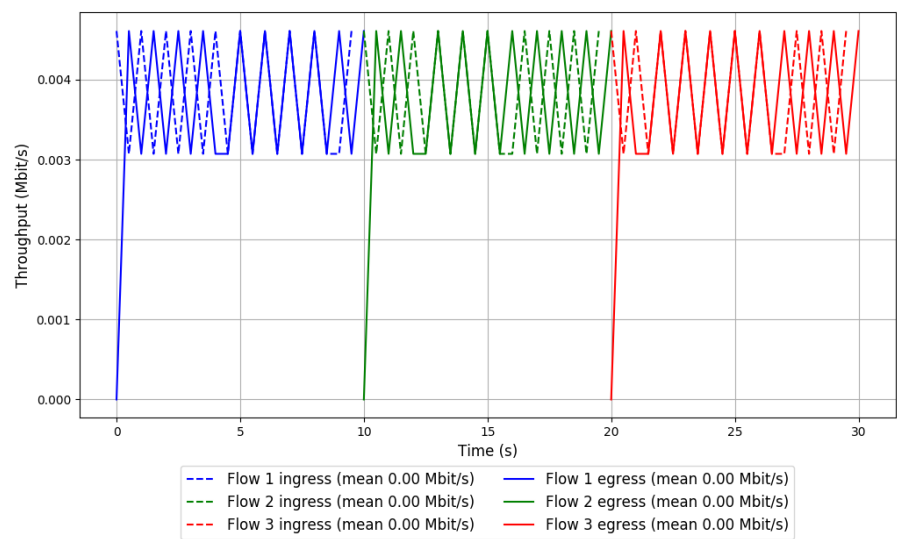


Run 3: Statistics of FillP-Sheep

Start at: 2018-06-29 20:07:32
End at: 2018-06-29 20:08:02
Local clock offset: 1.784 ms
Remote clock offset: -7.374 ms

Below is generated by plot.py at 2018-06-29 20:24:05
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 57.324 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 59.378 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 56.880 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 51.064 ms
Loss rate: 0.00%

Run 3: Report of FillP-Sheep — Data Link

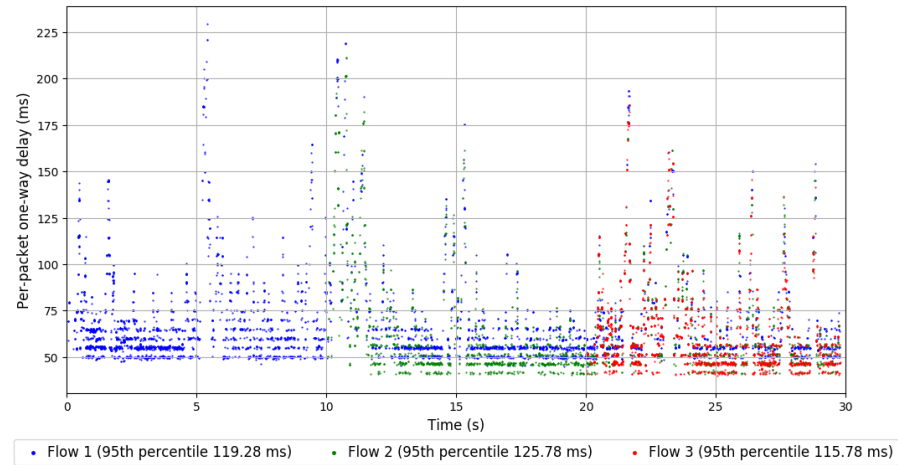
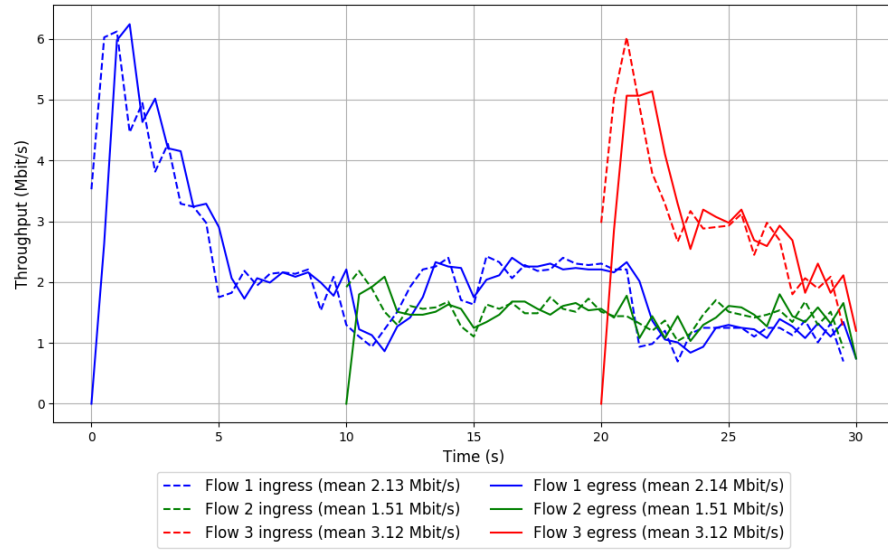


```
Run 1: Statistics of Indigo

Start at: 2018-06-29 19:36:40
End at: 2018-06-29 19:37:10
Local clock offset: 1.895 ms
Remote clock offset: -3.787 ms

# Below is generated by plot.py at 2018-06-29 20:24:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.16 Mbit/s
95th percentile per-packet one-way delay: 120.335 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 2.14 Mbit/s
95th percentile per-packet one-way delay: 119.284 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 1.51 Mbit/s
95th percentile per-packet one-way delay: 125.775 ms
Loss rate: 0.36%
-- Flow 3:
Average throughput: 3.12 Mbit/s
95th percentile per-packet one-way delay: 115.777 ms
Loss rate: 0.35%
```

Run 1: Report of Indigo — Data Link

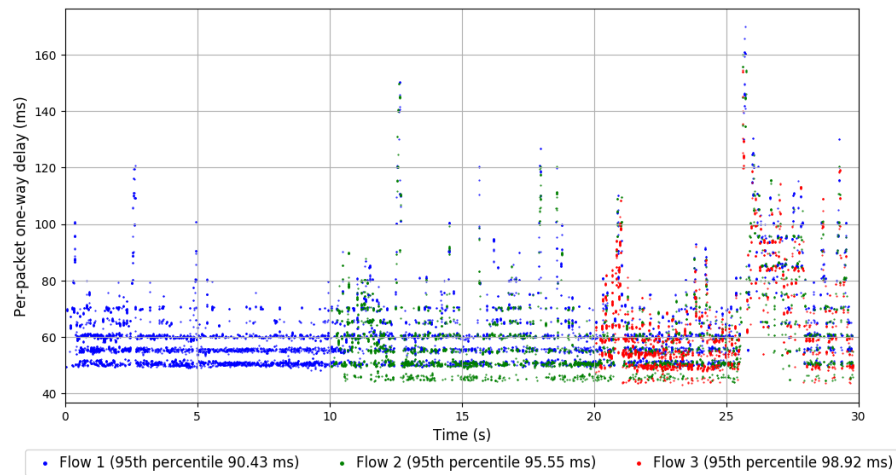
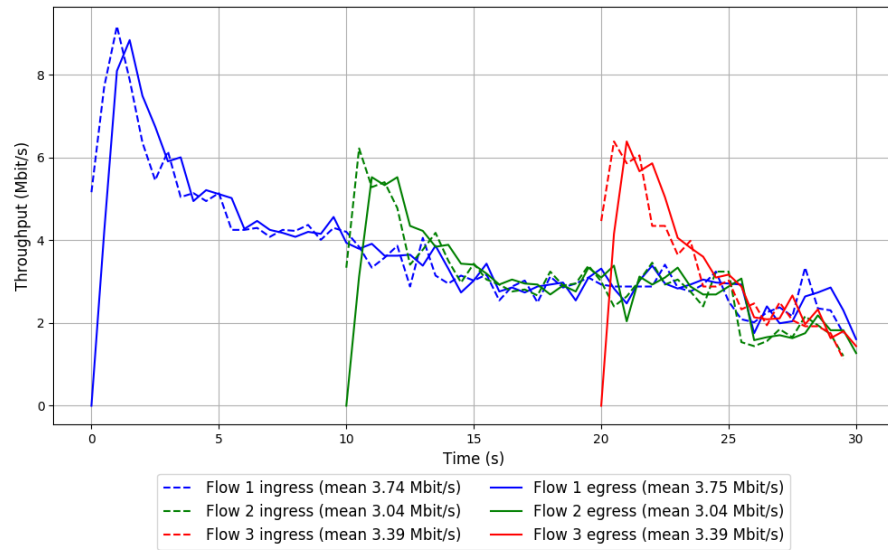


Run 2: Statistics of Indigo

Start at: 2018-06-29 19:55:20
End at: 2018-06-29 19:55:50
Local clock offset: 0.002 ms
Remote clock offset: -6.775 ms

Below is generated by plot.py at 2018-06-29 20:24:05
Datalink statistics
-- Total of 3 flows:
Average throughput: 6.87 Mbit/s
95th percentile per-packet one-way delay: 94.016 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 3.75 Mbit/s
95th percentile per-packet one-way delay: 90.431 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 3.04 Mbit/s
95th percentile per-packet one-way delay: 95.552 ms
Loss rate: 0.14%
-- Flow 3:
Average throughput: 3.39 Mbit/s
95th percentile per-packet one-way delay: 98.916 ms
Loss rate: 0.00%

Run 2: Report of Indigo — Data Link

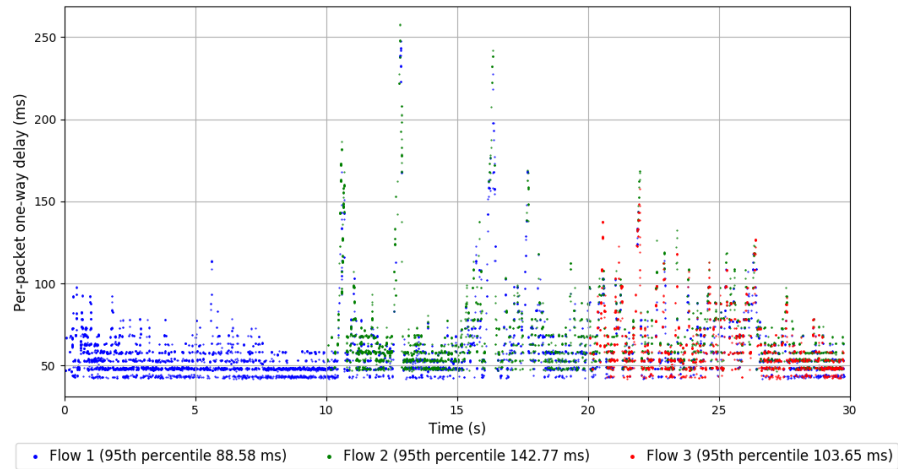
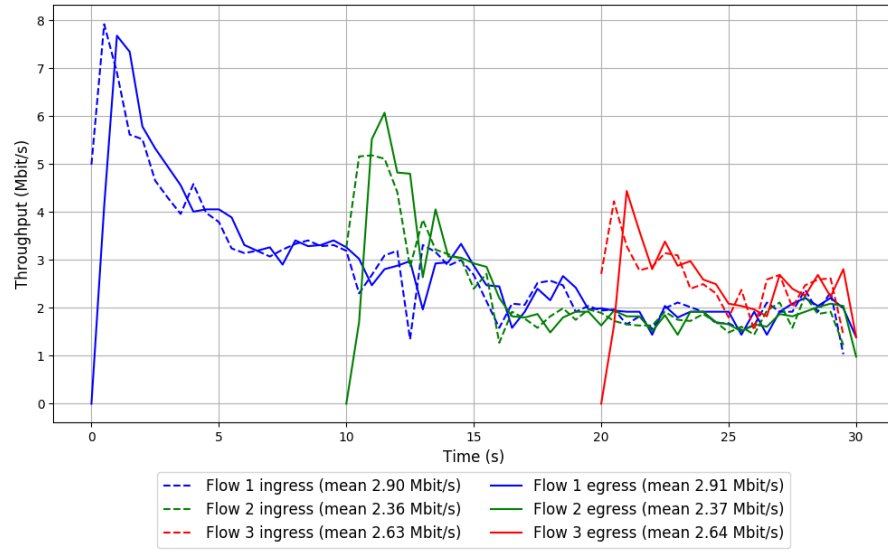


Run 3: Statistics of Indigo

Start at: 2018-06-29 20:14:06
End at: 2018-06-29 20:14:36
Local clock offset: 1.654 ms
Remote clock offset: -8.231 ms

```
# Below is generated by plot.py at 2018-06-29 20:24:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 5.33 Mbit/s
95th percentile per-packet one-way delay: 107.173 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 2.91 Mbit/s
95th percentile per-packet one-way delay: 88.581 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 2.37 Mbit/s
95th percentile per-packet one-way delay: 142.768 ms
Loss rate: 0.28%
-- Flow 3:
Average throughput: 2.64 Mbit/s
95th percentile per-packet one-way delay: 103.651 ms
Loss rate: 0.47%
```

Run 3: Report of Indigo — Data Link

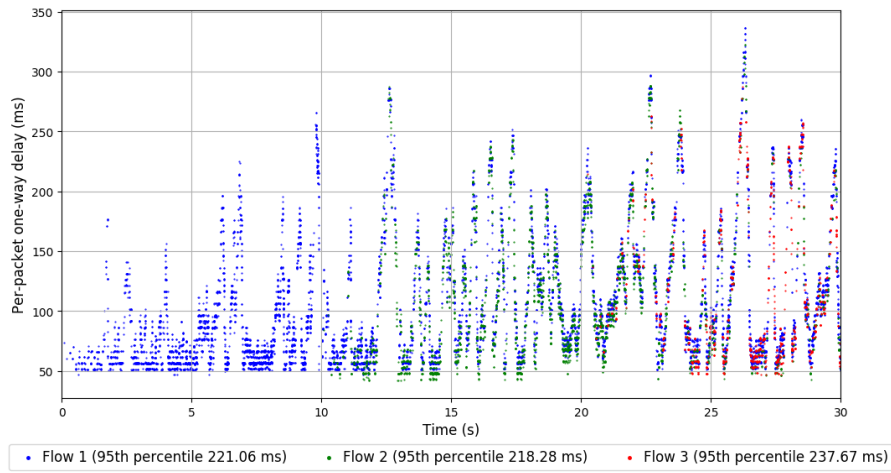
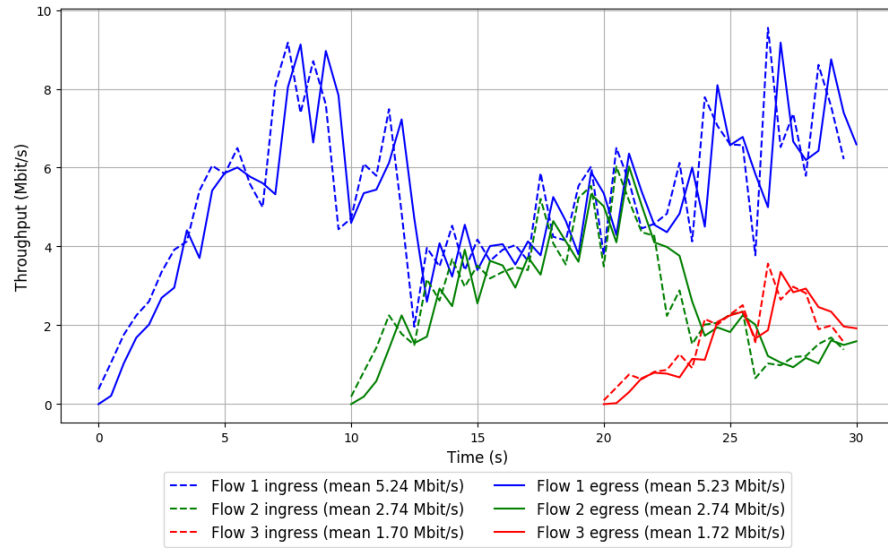


Run 1: Statistics of LEDBAT

Start at: 2018-06-29 19:35:34
End at: 2018-06-29 19:36:04
Local clock offset: 1.304 ms
Remote clock offset: -3.252 ms

Below is generated by plot.py at 2018-06-29 20:24:05
Datalink statistics
-- Total of 3 flows:
Average throughput: 7.61 Mbit/s
95th percentile per-packet one-way delay: 222.118 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 5.23 Mbit/s
95th percentile per-packet one-way delay: 221.056 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 2.74 Mbit/s
95th percentile per-packet one-way delay: 218.285 ms
Loss rate: 0.30%
-- Flow 3:
Average throughput: 1.72 Mbit/s
95th percentile per-packet one-way delay: 237.668 ms
Loss rate: 0.62%

Run 1: Report of LEDBAT — Data Link

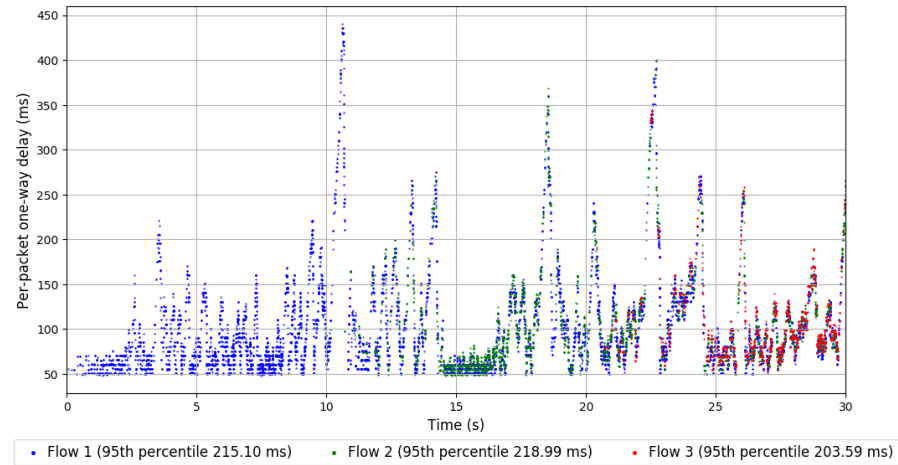
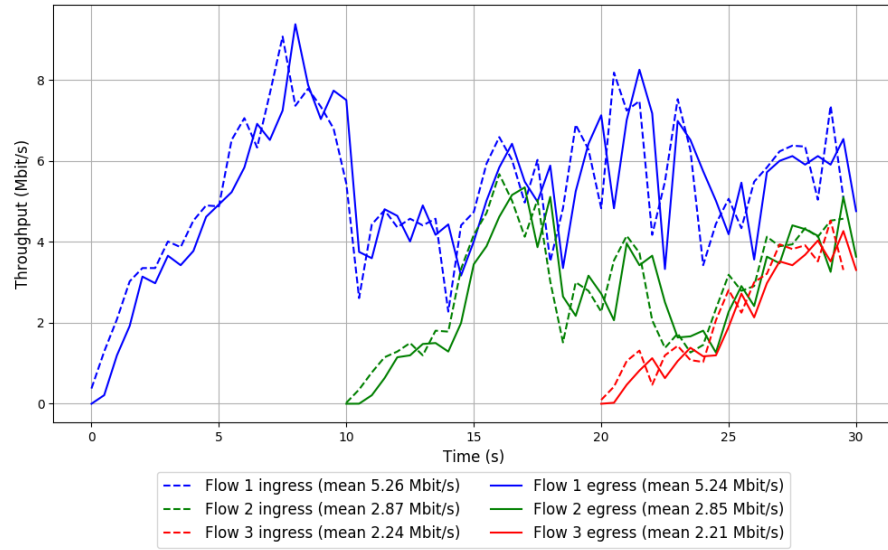


Run 2: Statistics of LEDBAT

Start at: 2018-06-29 19:54:14
End at: 2018-06-29 19:54:44
Local clock offset: 0.644 ms
Remote clock offset: -5.904 ms

Below is generated by plot.py at 2018-06-29 20:24:05
Datalink statistics
-- Total of 3 flows:
Average throughput: 7.85 Mbit/s
95th percentile per-packet one-way delay: 215.195 ms
Loss rate: 0.94%
-- Flow 1:
Average throughput: 5.24 Mbit/s
95th percentile per-packet one-way delay: 215.104 ms
Loss rate: 0.61%
-- Flow 2:
Average throughput: 2.85 Mbit/s
95th percentile per-packet one-way delay: 218.988 ms
Loss rate: 1.27%
-- Flow 3:
Average throughput: 2.21 Mbit/s
95th percentile per-packet one-way delay: 203.593 ms
Loss rate: 2.48%

Run 2: Report of LEDBAT — Data Link

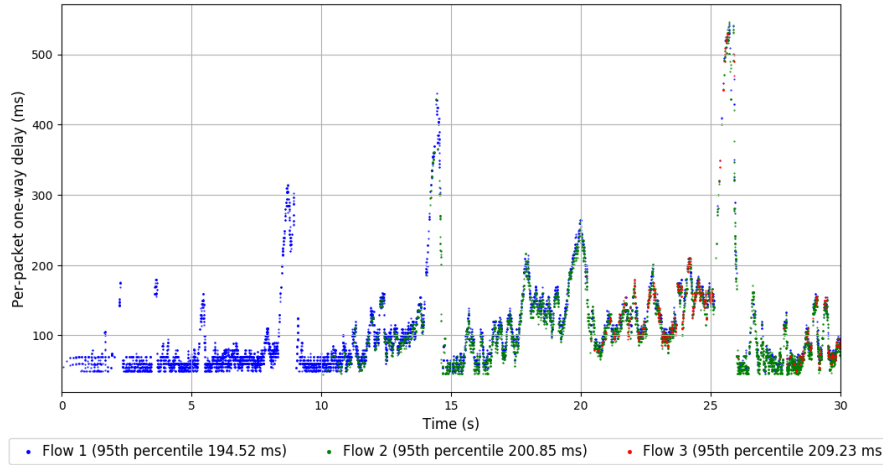
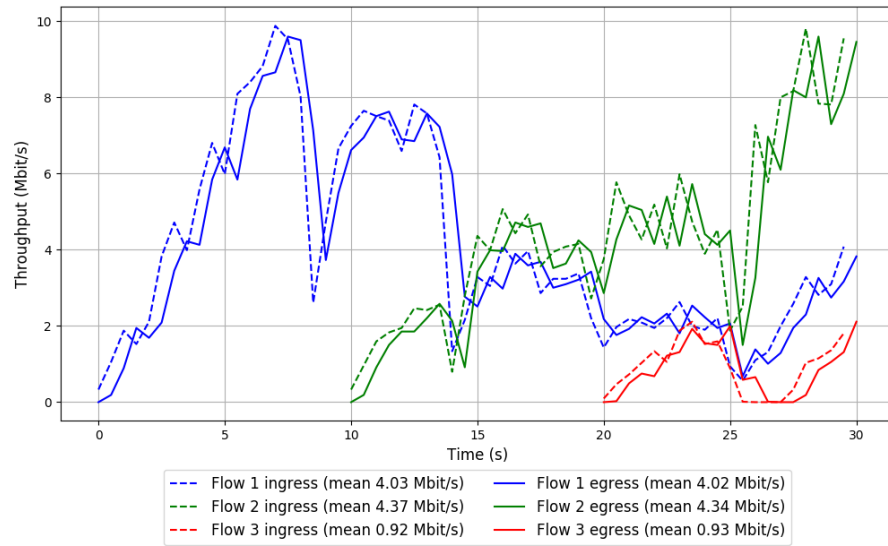


Run 3: Statistics of LEDBAT

Start at: 2018-06-29 20:13:00
End at: 2018-06-29 20:13:30
Local clock offset: 0.71 ms
Remote clock offset: -7.718 ms

Below is generated by plot.py at 2018-06-29 20:24:05
Datalink statistics
-- Total of 3 flows:
Average throughput: 7.21 Mbit/s
95th percentile per-packet one-way delay: 199.376 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 4.02 Mbit/s
95th percentile per-packet one-way delay: 194.524 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 4.34 Mbit/s
95th percentile per-packet one-way delay: 200.847 ms
Loss rate: 0.86%
-- Flow 3:
Average throughput: 0.93 Mbit/s
95th percentile per-packet one-way delay: 209.230 ms
Loss rate: 1.02%

Run 3: Report of LEDBAT — Data Link

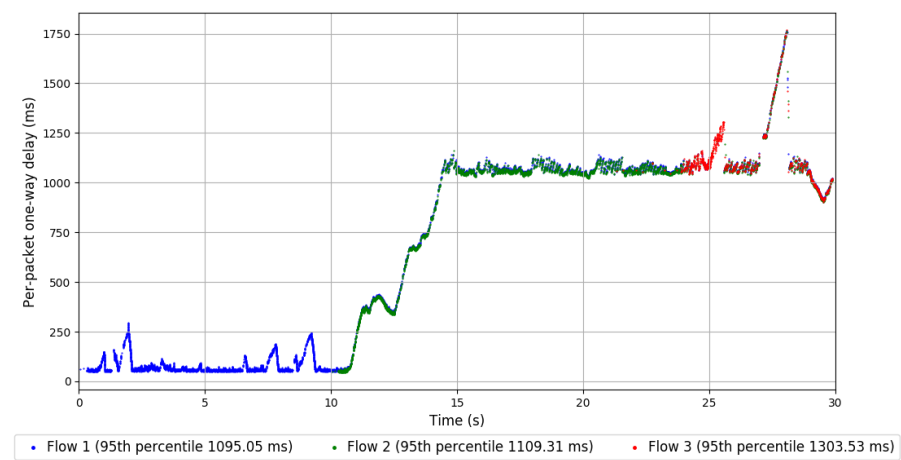
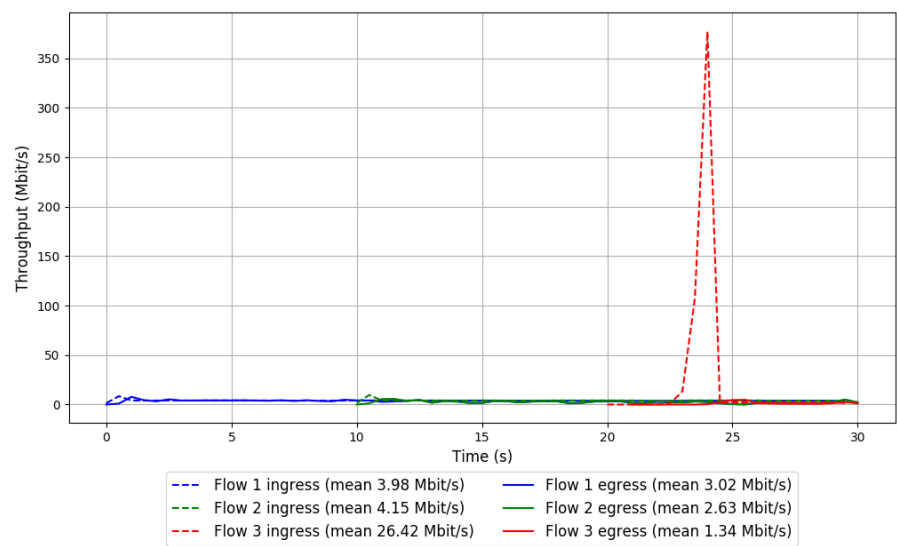


Run 1: Statistics of PCC-Allegro

Start at: 2018-06-29 19:39:58
End at: 2018-06-29 19:40:28
Local clock offset: 0.34 ms
Remote clock offset: -2.471 ms

Below is generated by plot.py at 2018-06-29 20:24:05
Datalink statistics
-- Total of 3 flows:
Average throughput: 5.15 Mbit/s
95th percentile per-packet one-way delay: 1115.840 ms
Loss rate: 66.73%
-- Flow 1:
Average throughput: 3.02 Mbit/s
95th percentile per-packet one-way delay: 1095.053 ms
Loss rate: 24.20%
-- Flow 2:
Average throughput: 2.63 Mbit/s
95th percentile per-packet one-way delay: 1109.310 ms
Loss rate: 36.79%
-- Flow 3:
Average throughput: 1.34 Mbit/s
95th percentile per-packet one-way delay: 1303.526 ms
Loss rate: 95.61%

Run 1: Report of PCC-Allegro — Data Link



Run 2: Statistics of PCC-Allegro

Start at: 2018-06-29 19:58:39

End at: 2018-06-29 19:59:09

Local clock offset: 1.049 ms

Remote clock offset: -7.01 ms

Below is generated by plot.py at 2018-06-29 20:24:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 7.66 Mbit/s

95th percentile per-packet one-way delay: 1072.494 ms

Loss rate: 11.31%

-- Flow 1:

Average throughput: 4.03 Mbit/s

95th percentile per-packet one-way delay: 1065.175 ms

Loss rate: 7.58%

-- Flow 2:

Average throughput: 3.88 Mbit/s

95th percentile per-packet one-way delay: 1072.335 ms

Loss rate: 11.63%

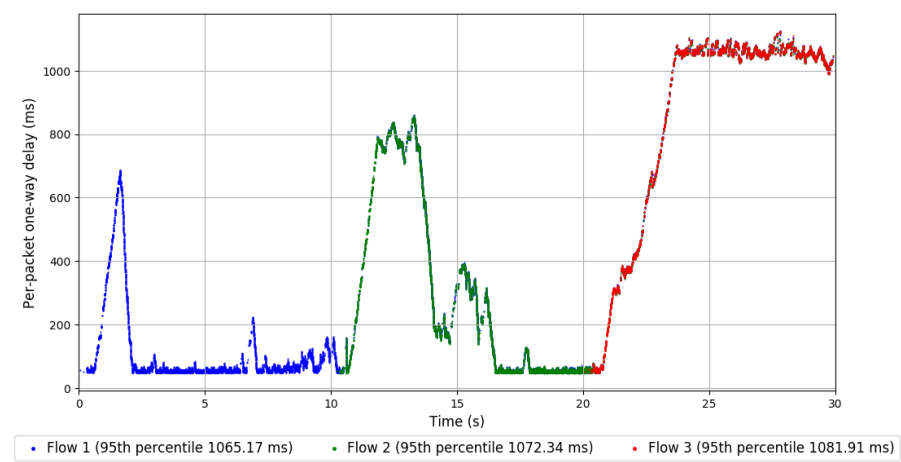
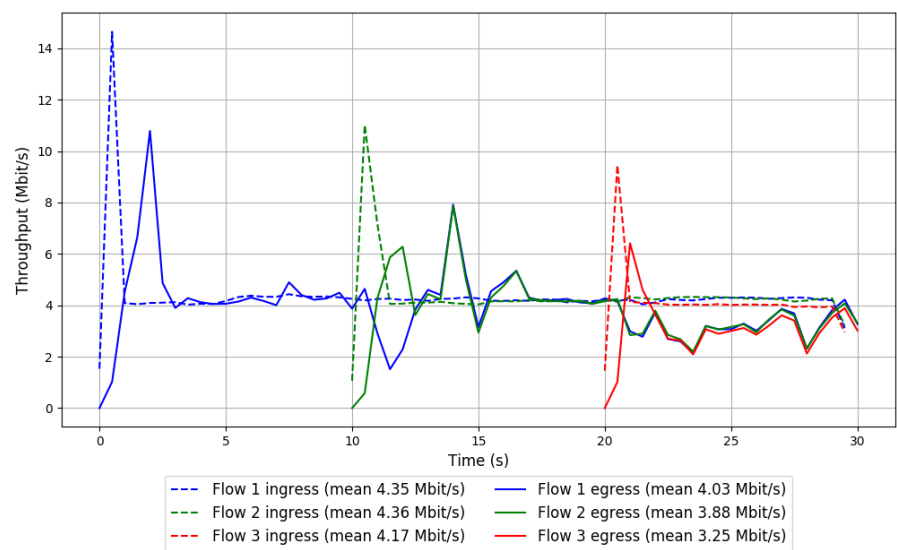
-- Flow 3:

Average throughput: 3.25 Mbit/s

95th percentile per-packet one-way delay: 1081.909 ms

Loss rate: 22.45%

Run 2: Report of PCC-Allegro — Data Link

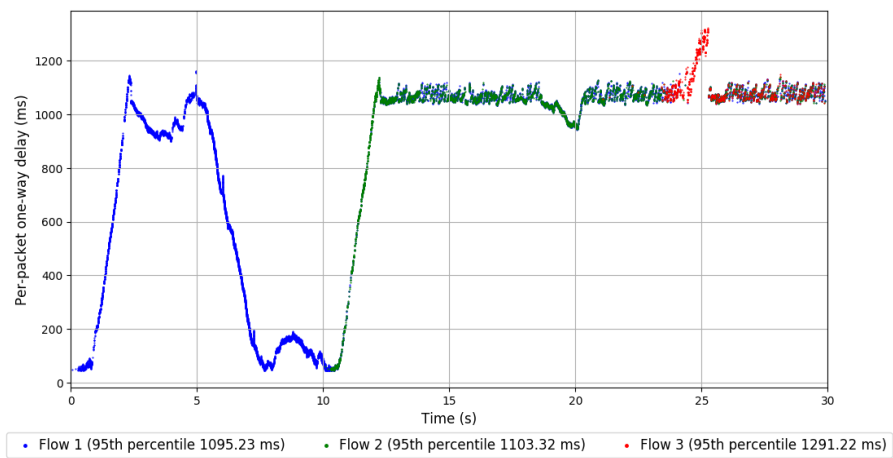
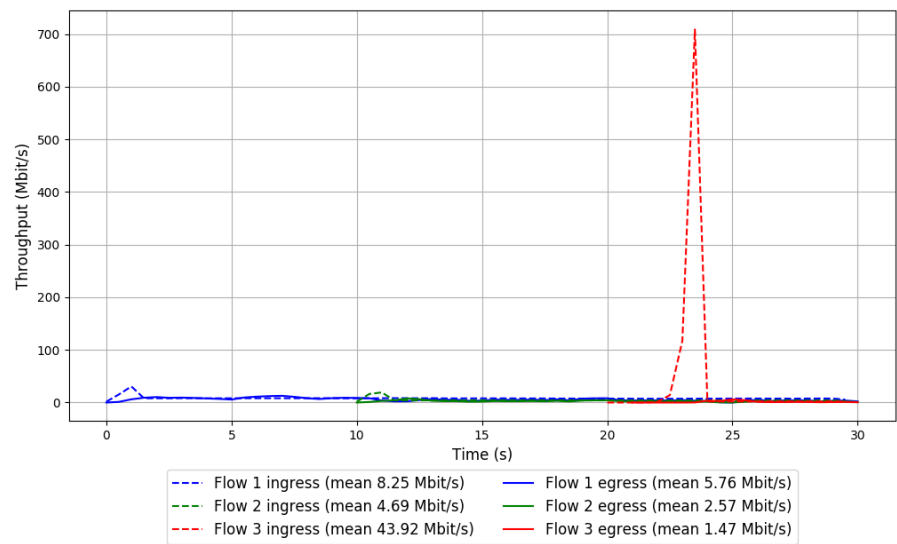


Run 3: Statistics of PCC-Allegro

Start at: 2018-06-29 20:17:24
End at: 2018-06-29 20:17:54
Local clock offset: 0.6 ms
Remote clock offset: -5.787 ms

Below is generated by plot.py at 2018-06-29 20:24:11
Datalink statistics
-- Total of 3 flows:
Average throughput: 7.91 Mbit/s
95th percentile per-packet one-way delay: 1106.378 ms
Loss rate: 69.45%
-- Flow 1:
Average throughput: 5.76 Mbit/s
95th percentile per-packet one-way delay: 1095.227 ms
Loss rate: 30.18%
-- Flow 2:
Average throughput: 2.57 Mbit/s
95th percentile per-packet one-way delay: 1103.319 ms
Loss rate: 45.26%
-- Flow 3:
Average throughput: 1.47 Mbit/s
95th percentile per-packet one-way delay: 1291.222 ms
Loss rate: 97.01%

Run 3: Report of PCC-Allegro — Data Link

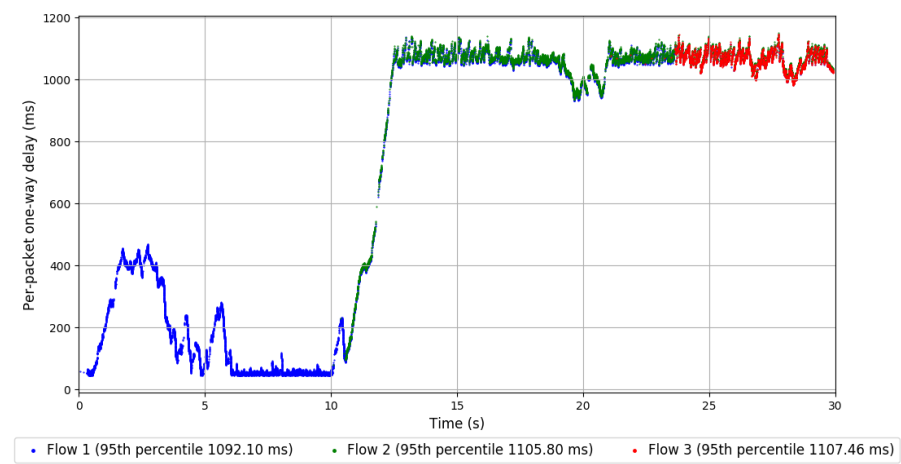
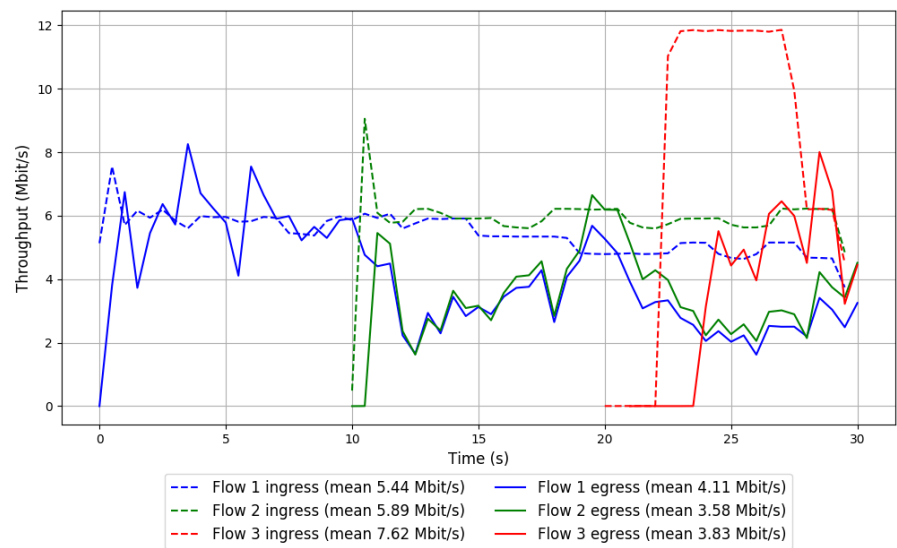


```
Run 1: Statistics of PCC-Expr

Start at: 2018-06-29 19:42:09
End at: 2018-06-29 19:42:39
Local clock offset: -1.907 ms
Remote clock offset: -2.69 ms

# Below is generated by plot.py at 2018-06-29 20:24:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.62 Mbit/s
95th percentile per-packet one-way delay: 1100.783 ms
Loss rate: 35.94%
-- Flow 1:
Average throughput: 4.11 Mbit/s
95th percentile per-packet one-way delay: 1092.095 ms
Loss rate: 24.52%
-- Flow 2:
Average throughput: 3.58 Mbit/s
95th percentile per-packet one-way delay: 1105.800 ms
Loss rate: 39.40%
-- Flow 3:
Average throughput: 3.83 Mbit/s
95th percentile per-packet one-way delay: 1107.461 ms
Loss rate: 55.20%
```

Run 1: Report of PCC-Expr — Data Link

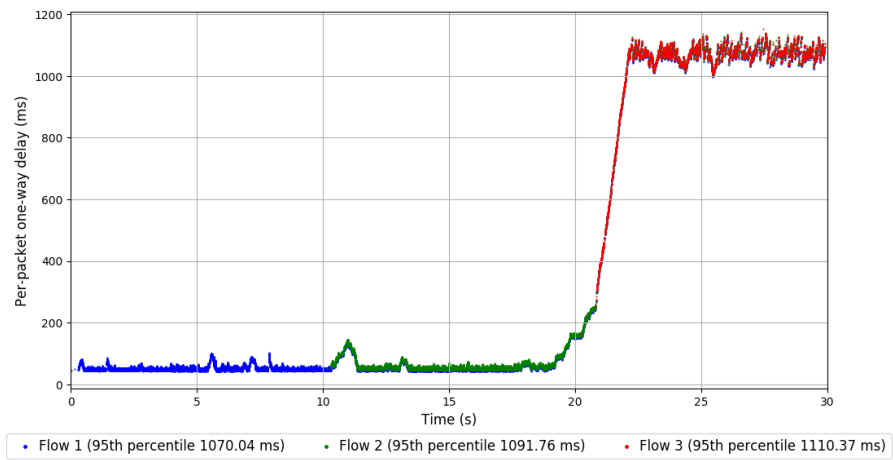
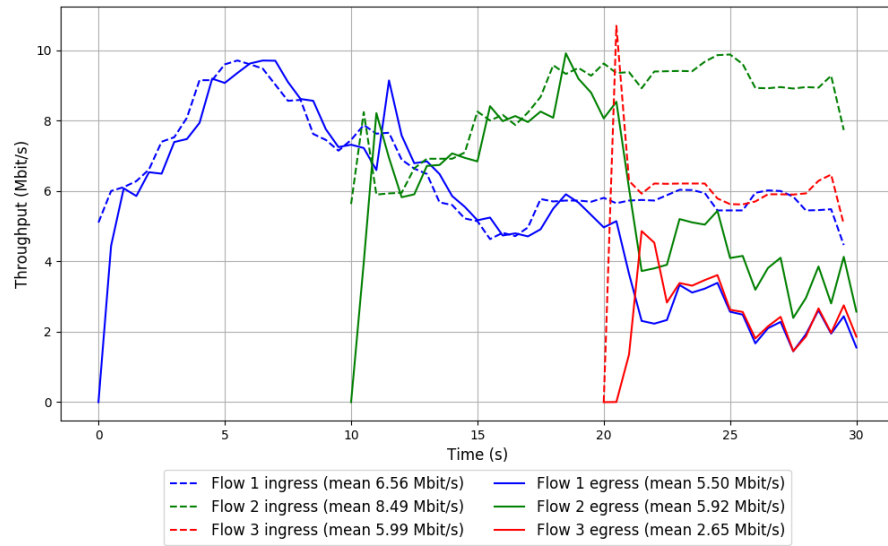


Run 2: Statistics of PCC-Expr

Start at: 2018-06-29 20:00:51
End at: 2018-06-29 20:01:21
Local clock offset: 1.57 ms
Remote clock offset: -7.147 ms

Below is generated by plot.py at 2018-06-29 20:24:27
Datalink statistics
-- Total of 3 flows:
Average throughput: 10.30 Mbit/s
95th percentile per-packet one-way delay: 1087.952 ms
Loss rate: 27.49%
-- Flow 1:
Average throughput: 5.50 Mbit/s
95th percentile per-packet one-way delay: 1070.040 ms
Loss rate: 16.23%
-- Flow 2:
Average throughput: 5.92 Mbit/s
95th percentile per-packet one-way delay: 1091.763 ms
Loss rate: 30.43%
-- Flow 3:
Average throughput: 2.65 Mbit/s
95th percentile per-packet one-way delay: 1110.367 ms
Loss rate: 56.42%

Run 2: Report of PCC-Expr — Data Link

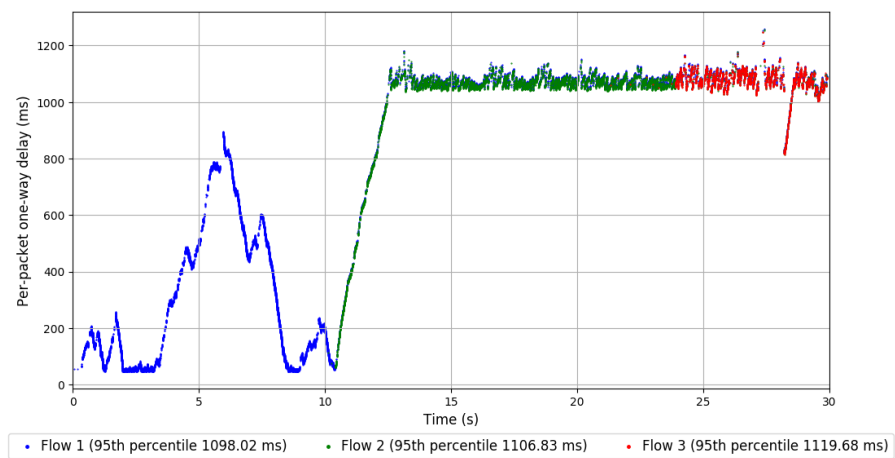
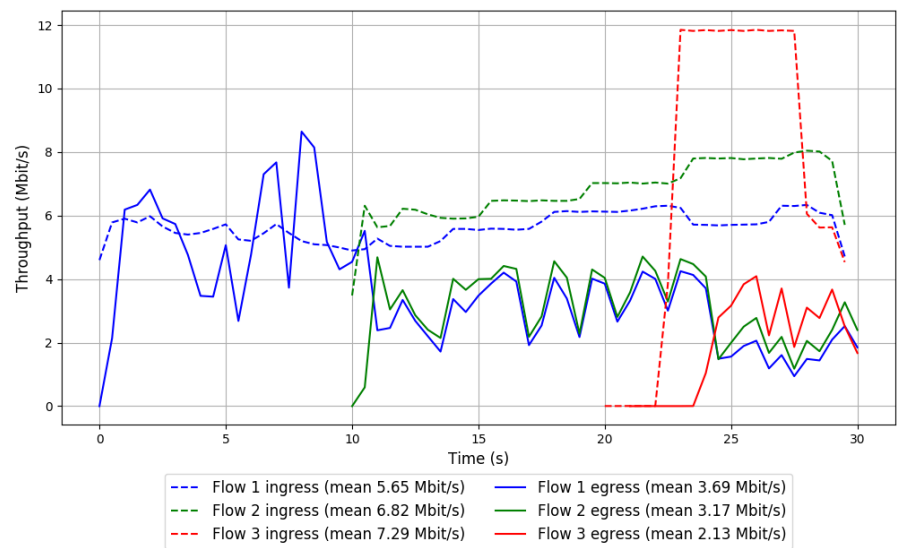


Run 3: Statistics of PCC-Expr

Start at: 2018-06-29 20:19:36
End at: 2018-06-29 20:20:06
Local clock offset: 2.384 ms
Remote clock offset: -4.309 ms

Below is generated by plot.py at 2018-06-29 20:24:27
Datalink statistics
-- Total of 3 flows:
Average throughput: 6.40 Mbit/s
95th percentile per-packet one-way delay: 1105.820 ms
Loss rate: 49.23%
-- Flow 1:
Average throughput: 3.69 Mbit/s
95th percentile per-packet one-way delay: 1098.019 ms
Loss rate: 34.76%
-- Flow 2:
Average throughput: 3.17 Mbit/s
95th percentile per-packet one-way delay: 1106.829 ms
Loss rate: 53.73%
-- Flow 3:
Average throughput: 2.13 Mbit/s
95th percentile per-packet one-way delay: 1119.680 ms
Loss rate: 74.68%

Run 3: Report of PCC-Expr — Data Link

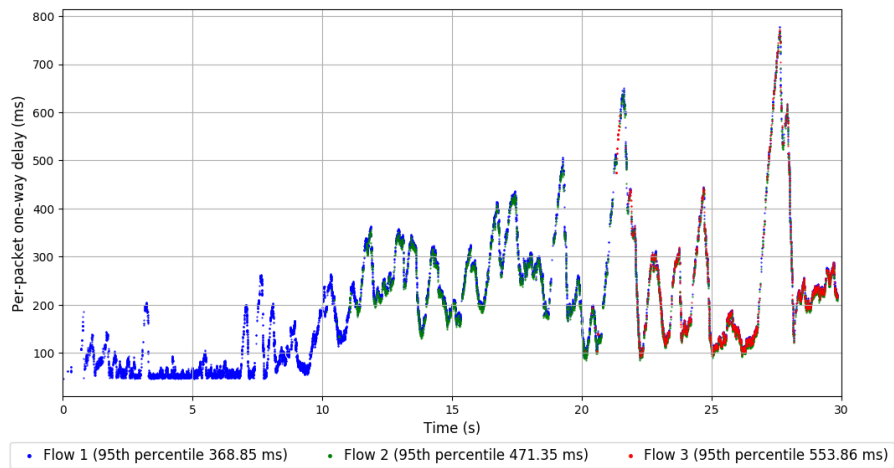
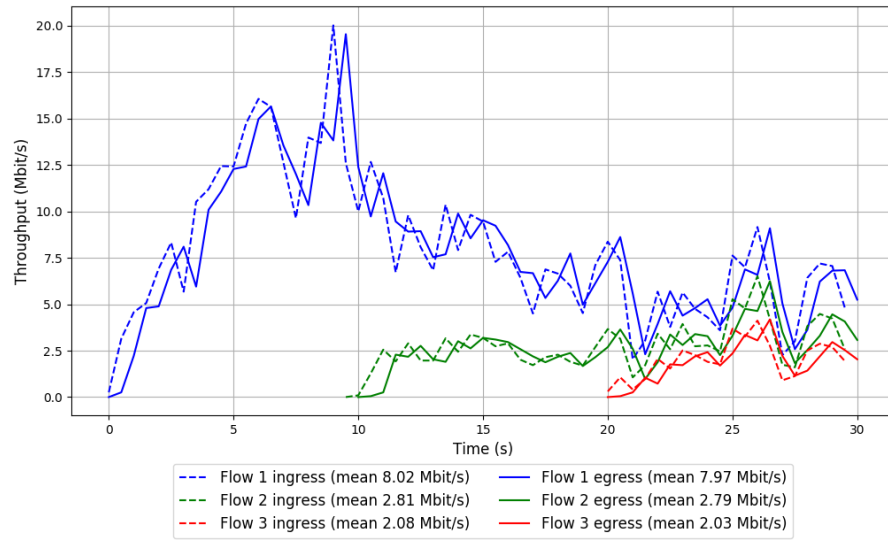


Run 1: Statistics of QUIC Cubic

Start at: 2018-06-29 19:37:45
End at: 2018-06-29 19:38:15
Local clock offset: 1.774 ms
Remote clock offset: -2.987 ms

Below is generated by plot.py at 2018-06-29 20:24:27
Datalink statistics
-- Total of 3 flows:
Average throughput: 10.48 Mbit/s
95th percentile per-packet one-way delay: 405.999 ms
Loss rate: 1.01%
-- Flow 1:
Average throughput: 7.97 Mbit/s
95th percentile per-packet one-way delay: 368.848 ms
Loss rate: 0.70%
-- Flow 2:
Average throughput: 2.79 Mbit/s
95th percentile per-packet one-way delay: 471.346 ms
Loss rate: 1.50%
-- Flow 3:
Average throughput: 2.03 Mbit/s
95th percentile per-packet one-way delay: 553.856 ms
Loss rate: 3.28%

Run 1: Report of QUIC Cubic — Data Link

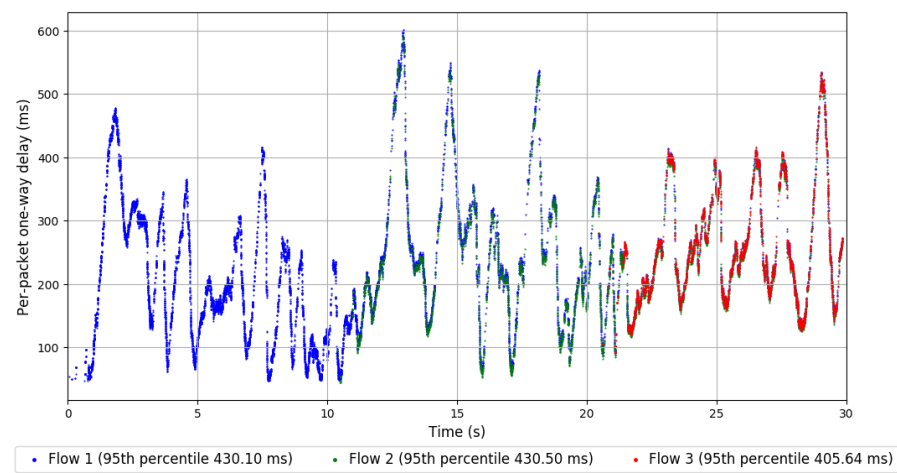
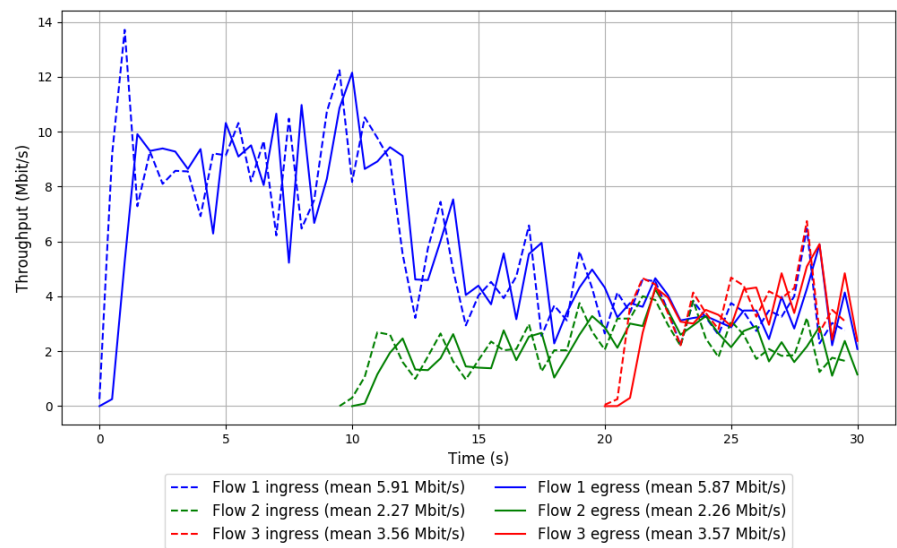


Run 2: Statistics of QUIC Cubic

Start at: 2018-06-29 19:56:26
End at: 2018-06-29 19:56:56
Local clock offset: 1.127 ms
Remote clock offset: -6.081 ms

Below is generated by plot.py at 2018-06-29 20:24:27
Datalink statistics
-- Total of 3 flows:
Average throughput: 8.49 Mbit/s
95th percentile per-packet one-way delay: 427.538 ms
Loss rate: 1.21%
-- Flow 1:
Average throughput: 5.87 Mbit/s
95th percentile per-packet one-way delay: 430.095 ms
Loss rate: 0.72%
-- Flow 2:
Average throughput: 2.26 Mbit/s
95th percentile per-packet one-way delay: 430.498 ms
Loss rate: 1.56%
-- Flow 3:
Average throughput: 3.57 Mbit/s
95th percentile per-packet one-way delay: 405.637 ms
Loss rate: 3.24%

Run 2: Report of QUIC Cubic — Data Link

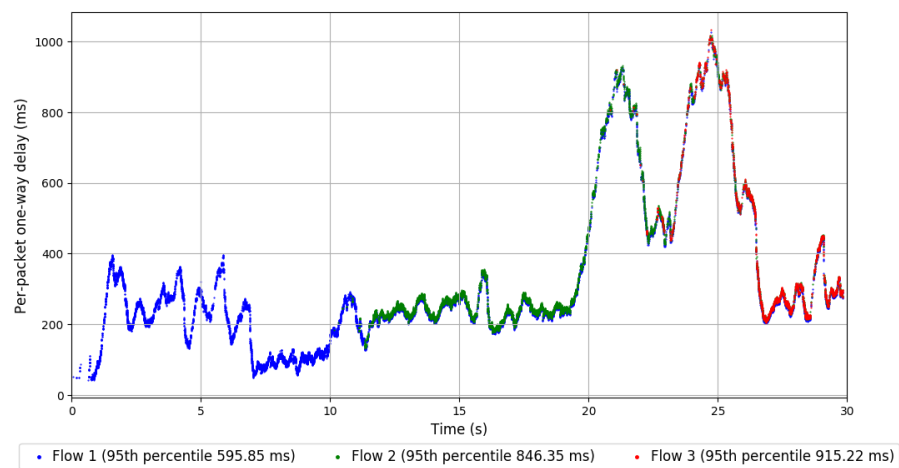
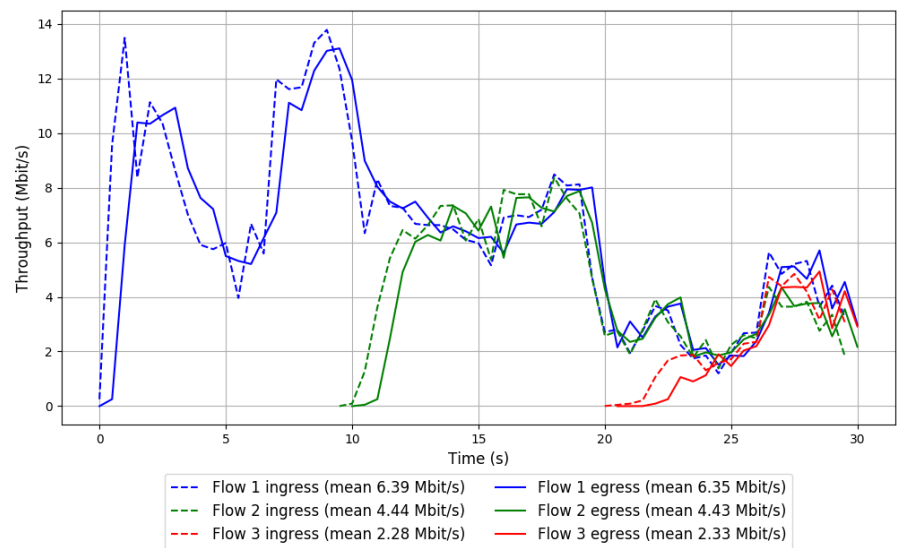


Run 3: Statistics of QUIC Cubic

Start at: 2018-06-29 20:15:12
End at: 2018-06-29 20:15:42
Local clock offset: 1.783 ms
Remote clock offset: -7.144 ms

Below is generated by plot.py at 2018-06-29 20:24:27
Datalink statistics
-- Total of 3 flows:
Average throughput: 9.98 Mbit/s
95th percentile per-packet one-way delay: 796.869 ms
Loss rate: 1.36%
-- Flow 1:
Average throughput: 6.35 Mbit/s
95th percentile per-packet one-way delay: 595.850 ms
Loss rate: 0.91%
-- Flow 2:
Average throughput: 4.43 Mbit/s
95th percentile per-packet one-way delay: 846.351 ms
Loss rate: 1.13%
-- Flow 3:
Average throughput: 2.33 Mbit/s
95th percentile per-packet one-way delay: 915.220 ms
Loss rate: 6.17%

Run 3: Report of QUIC Cubic — Data Link

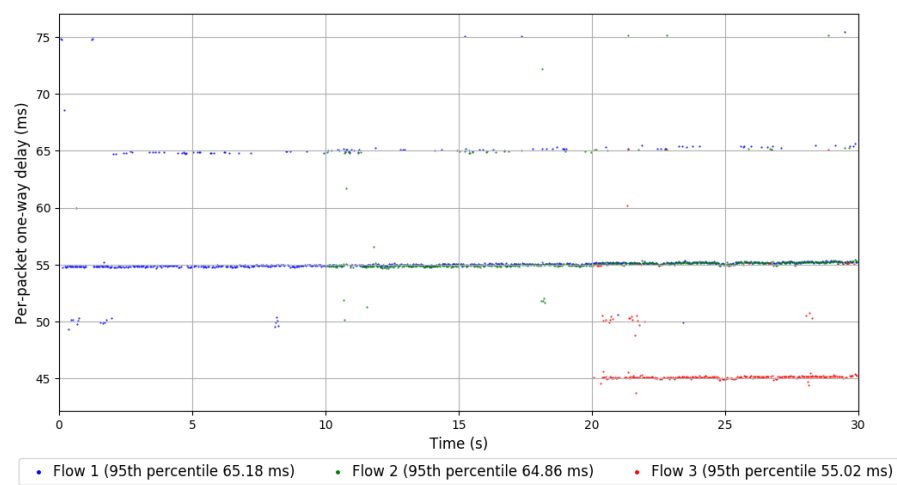
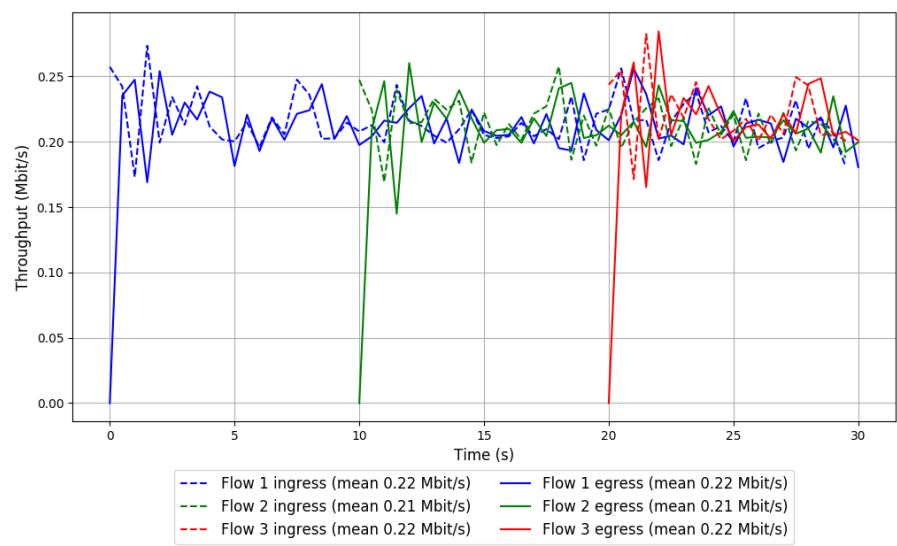


Run 1: Statistics of SReAM

Start at: 2018-06-29 19:43:17
End at: 2018-06-29 19:43:47
Local clock offset: 0.741 ms
Remote clock offset: -2.888 ms

Below is generated by plot.py at 2018-06-29 20:24:27
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 65.047 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 65.177 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 64.861 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 55.019 ms
Loss rate: 0.35%

Run 1: Report of SReAM — Data Link

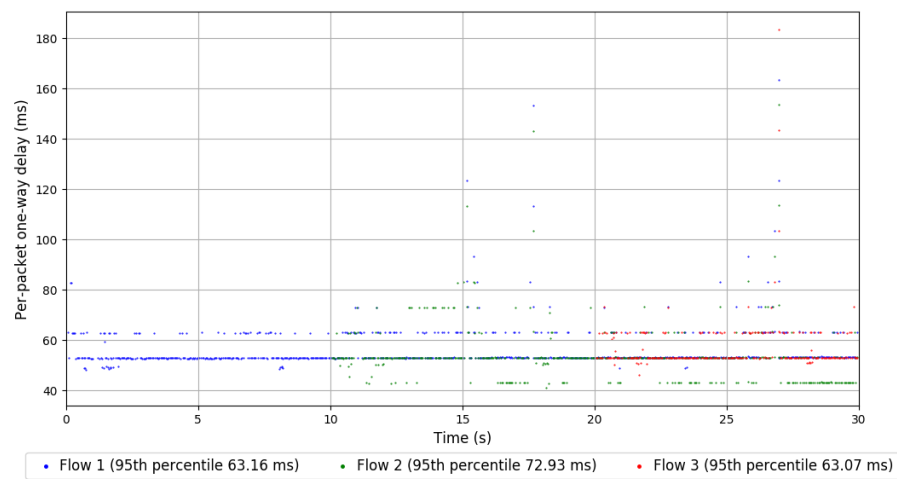
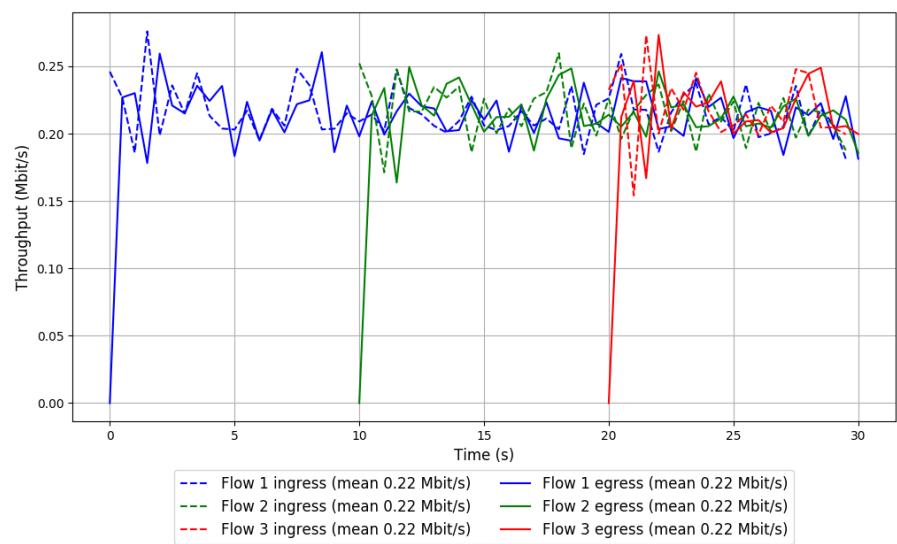


Run 2: Statistics of SReAM

Start at: 2018-06-29 20:01:57
End at: 2018-06-29 20:02:27
Local clock offset: 2.094 ms
Remote clock offset: -7.096 ms

Below is generated by plot.py at 2018-06-29 20:24:27
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 63.479 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.158 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 72.932 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.073 ms
Loss rate: 0.35%

Run 2: Report of SReAM — Data Link

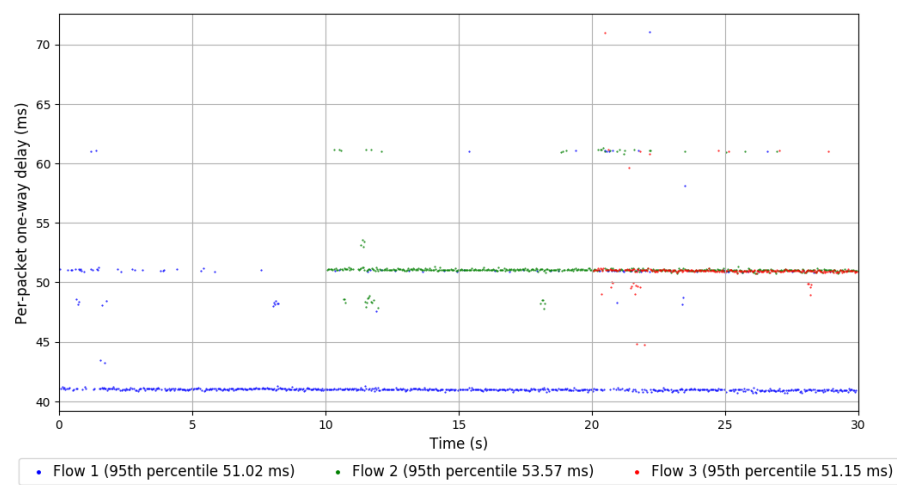
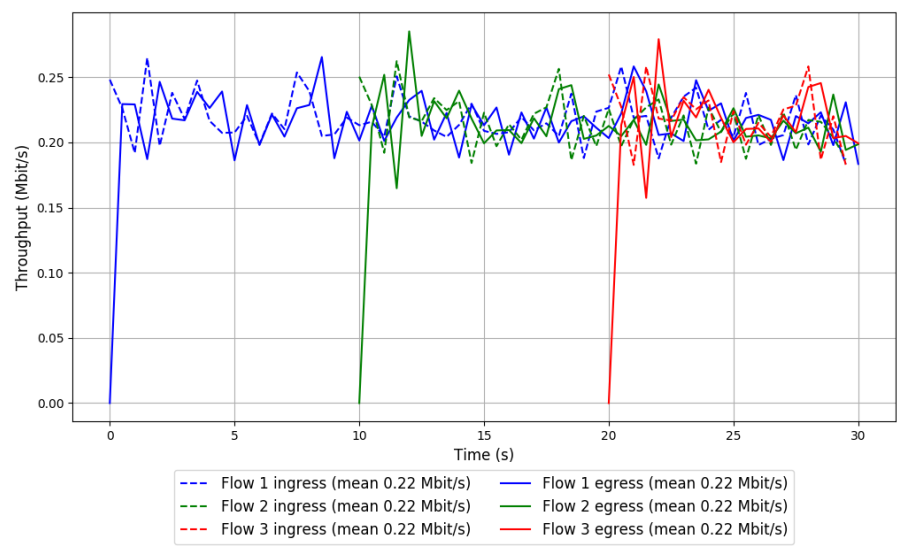


Run 3: Statistics of SReAM

Start at: 2018-06-29 20:20:42
End at: 2018-06-29 20:21:12
Local clock offset: 3.661 ms
Remote clock offset: -4.164 ms

Below is generated by plot.py at 2018-06-29 20:24:27
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 51.177 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 51.016 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 53.566 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 51.150 ms
Loss rate: 0.35%

Run 3: Report of SReAM — Data Link

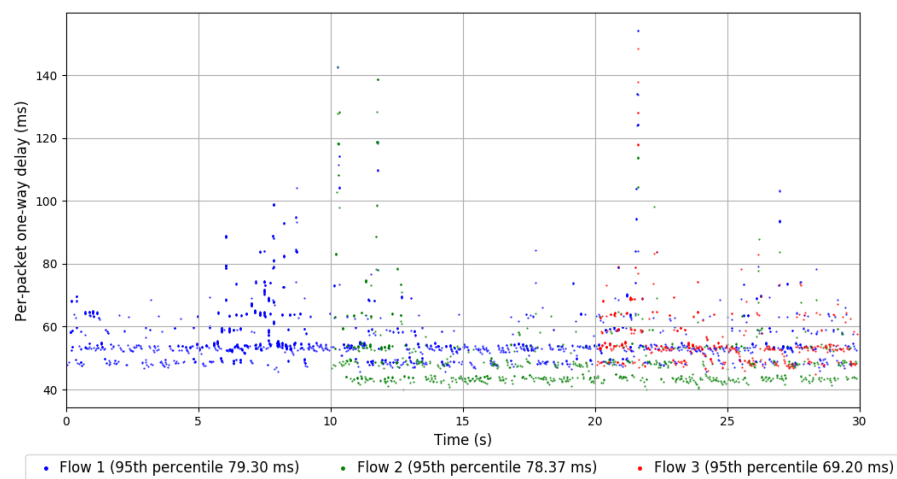
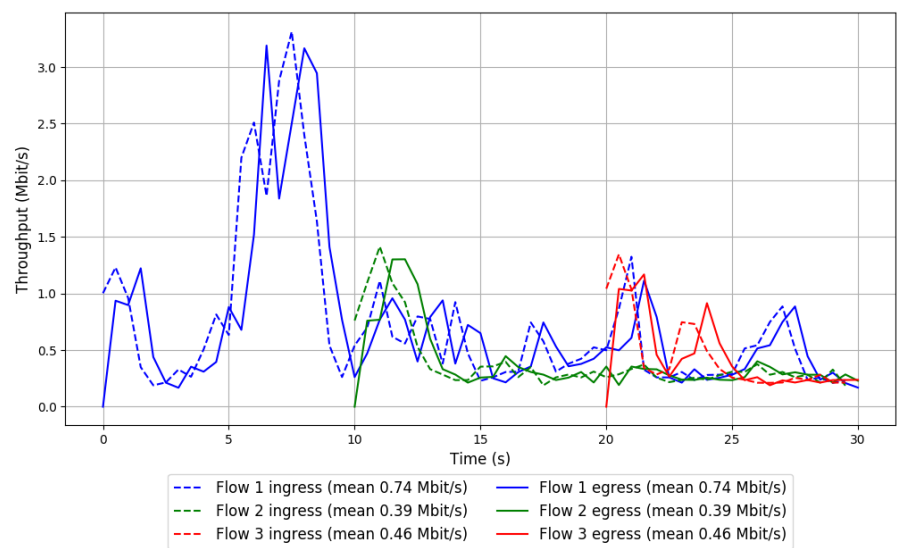


Run 1: Statistics of Sprout

Start at: 2018-06-29 19:34:29
End at: 2018-06-29 19:34:59
Local clock offset: 3.472 ms
Remote clock offset: -2.361 ms

Below is generated by plot.py at 2018-06-29 20:24:27
Datalink statistics
-- Total of 3 flows:
Average throughput: 1.15 Mbit/s
95th percentile per-packet one-way delay: 78.641 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 0.74 Mbit/s
95th percentile per-packet one-way delay: 79.300 ms
Loss rate: 0.21%
-- Flow 2:
Average throughput: 0.39 Mbit/s
95th percentile per-packet one-way delay: 78.372 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 0.46 Mbit/s
95th percentile per-packet one-way delay: 69.201 ms
Loss rate: 0.50%

Run 1: Report of Sprout — Data Link

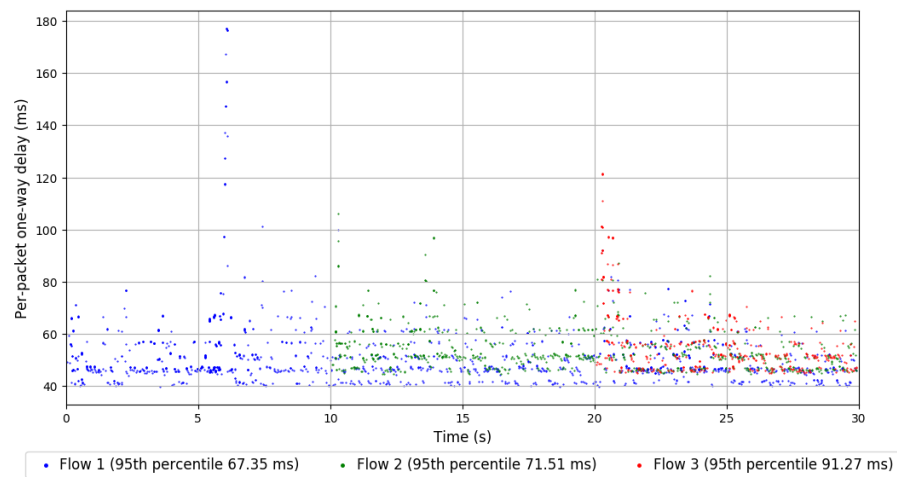
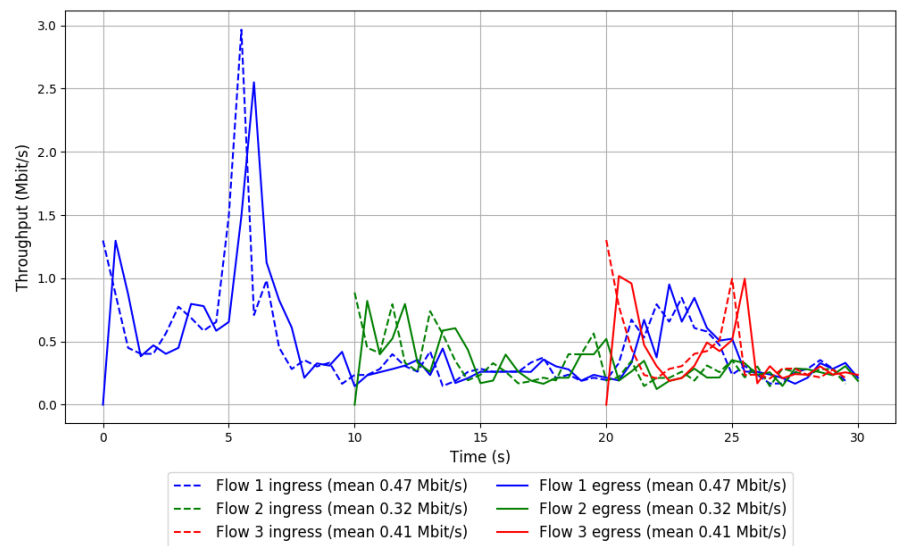


Run 2: Statistics of Sprout

Start at: 2018-06-29 19:53:09
End at: 2018-06-29 19:53:39
Local clock offset: 2.574 ms
Remote clock offset: -6.201 ms

```
# Below is generated by plot.py at 2018-06-29 20:24:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.82 Mbit/s
95th percentile per-packet one-way delay: 72.607 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.47 Mbit/s
95th percentile per-packet one-way delay: 67.354 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.32 Mbit/s
95th percentile per-packet one-way delay: 71.506 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.41 Mbit/s
95th percentile per-packet one-way delay: 91.268 ms
Loss rate: 0.00%
```


Run 2: Report of Sprout — Data Link

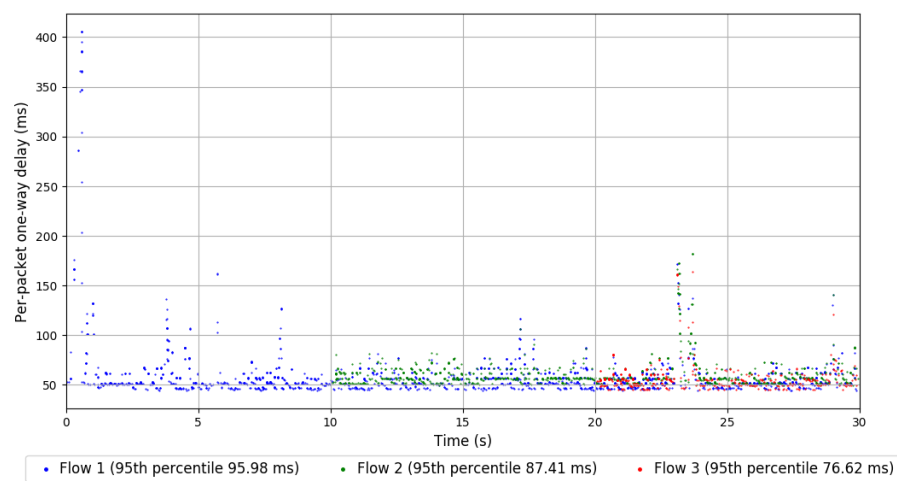
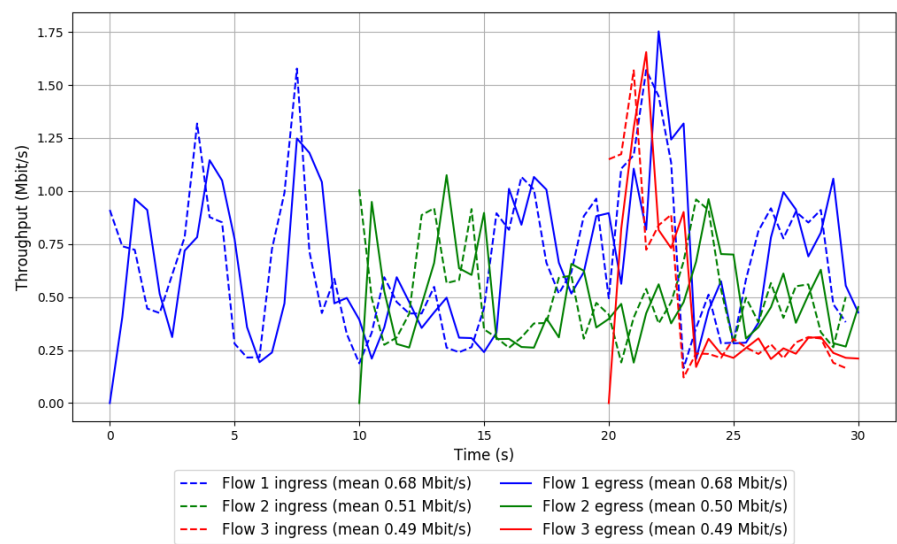


Run 3: Statistics of Sprout

Start at: 2018-06-29 20:11:55
End at: 2018-06-29 20:12:25
Local clock offset: -2.021 ms
Remote clock offset: -8.475 ms

```
# Below is generated by plot.py at 2018-06-29 20:24:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.17 Mbit/s
95th percentile per-packet one-way delay: 87.121 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 0.68 Mbit/s
95th percentile per-packet one-way delay: 95.980 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 0.50 Mbit/s
95th percentile per-packet one-way delay: 87.406 ms
Loss rate: 0.69%
-- Flow 3:
Average throughput: 0.49 Mbit/s
95th percentile per-packet one-way delay: 76.620 ms
Loss rate: 0.02%
```

Run 3: Report of Sprout — Data Link

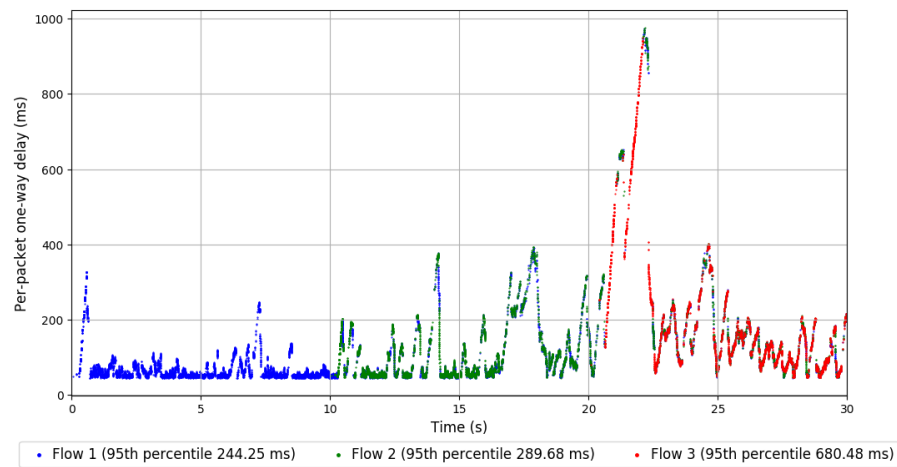
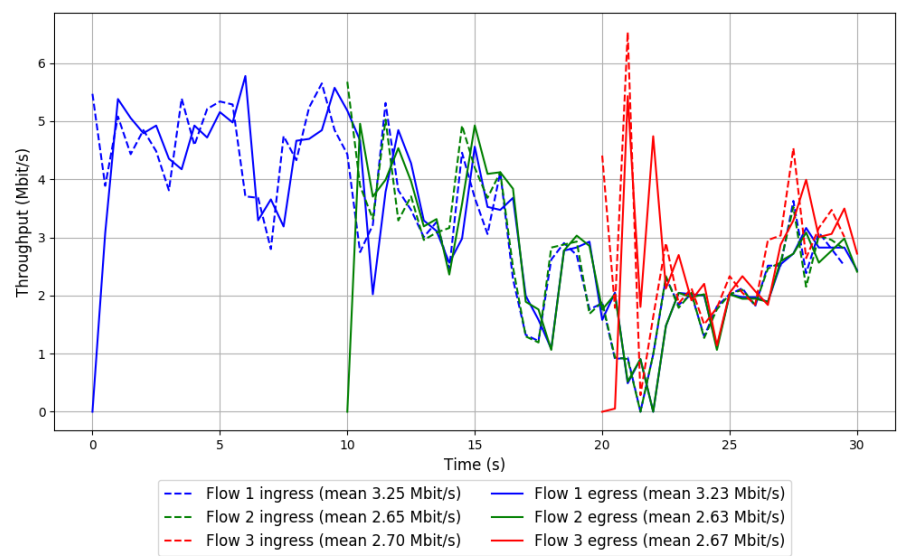


Run 1: Statistics of TaoVA-100x

Start at: 2018-06-29 19:32:17
End at: 2018-06-29 19:32:47
Local clock offset: 2.012 ms
Remote clock offset: -3.309 ms

Below is generated by plot.py at 2018-06-29 20:24:29
Datalink statistics
-- Total of 3 flows:
Average throughput: 5.86 Mbit/s
95th percentile per-packet one-way delay: 341.004 ms
Loss rate: 0.80%
-- Flow 1:
Average throughput: 3.23 Mbit/s
95th percentile per-packet one-way delay: 244.247 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 2.63 Mbit/s
95th percentile per-packet one-way delay: 289.679 ms
Loss rate: 0.98%
-- Flow 3:
Average throughput: 2.67 Mbit/s
95th percentile per-packet one-way delay: 680.480 ms
Loss rate: 1.88%

Run 1: Report of TaoVA-100x — Data Link

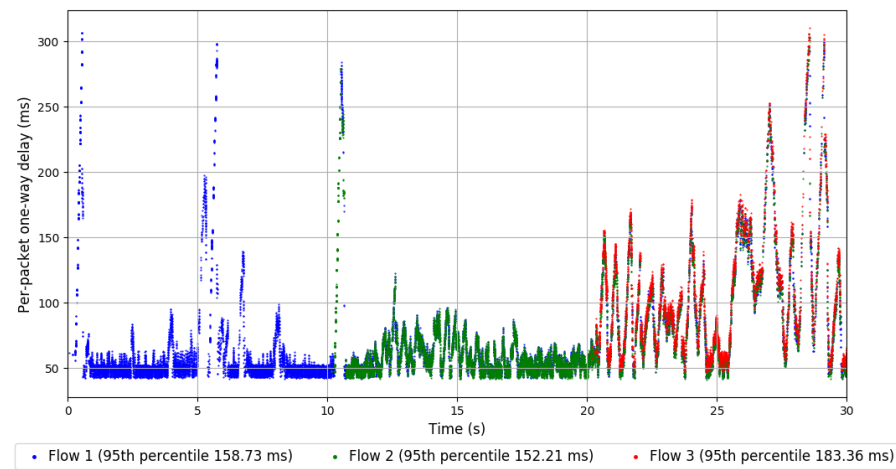
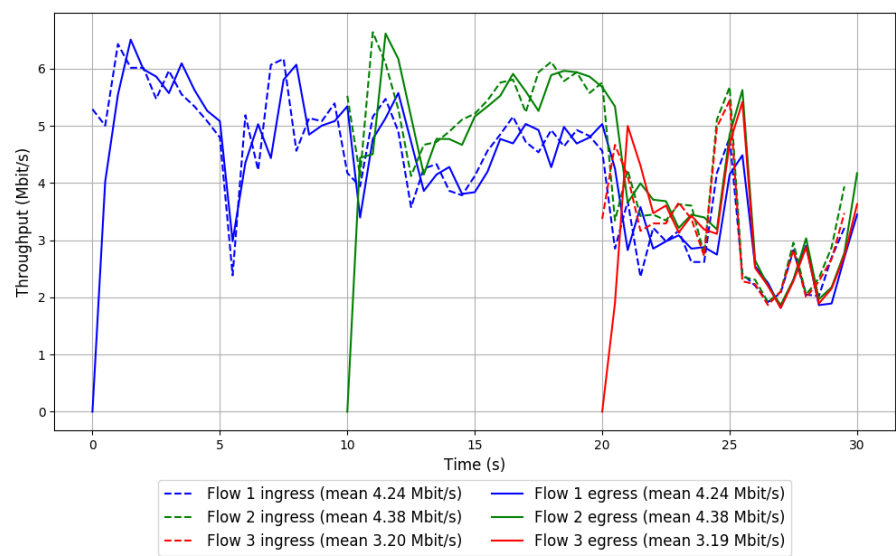


Run 2: Statistics of TaoVA-100x

Start at: 2018-06-29 19:50:57
End at: 2018-06-29 19:51:27
Local clock offset: 2.364 ms
Remote clock offset: -4.972 ms

Below is generated by plot.py at 2018-06-29 20:24:33
Datalink statistics
-- Total of 3 flows:
Average throughput: 8.21 Mbit/s
95th percentile per-packet one-way delay: 161.313 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 4.24 Mbit/s
95th percentile per-packet one-way delay: 158.731 ms
Loss rate: 0.19%
-- Flow 2:
Average throughput: 4.38 Mbit/s
95th percentile per-packet one-way delay: 152.208 ms
Loss rate: 0.30%
-- Flow 3:
Average throughput: 3.19 Mbit/s
95th percentile per-packet one-way delay: 183.363 ms
Loss rate: 0.73%

Run 2: Report of TaoVA-100x — Data Link



Run 3: Statistics of TaoVA-100x

Start at: 2018-06-29 20:09:42

End at: 2018-06-29 20:10:12

Local clock offset: -1.024 ms

Remote clock offset: -8.41 ms

Below is generated by plot.py at 2018-06-29 20:24:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.26 Mbit/s

95th percentile per-packet one-way delay: 192.973 ms

Loss rate: 0.28%

-- Flow 1:

Average throughput: 4.39 Mbit/s

95th percentile per-packet one-way delay: 149.114 ms

Loss rate: 0.19%

-- Flow 2:

Average throughput: 4.11 Mbit/s

95th percentile per-packet one-way delay: 171.668 ms

Loss rate: 0.22%

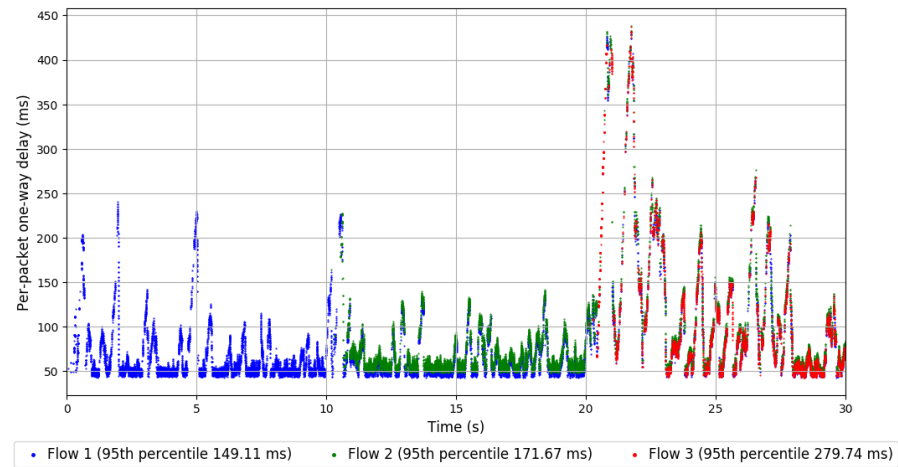
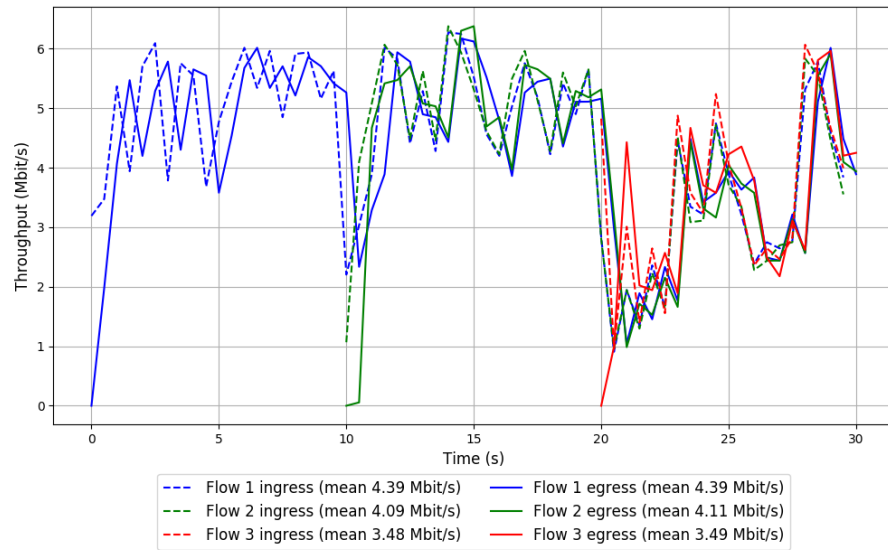
-- Flow 3:

Average throughput: 3.49 Mbit/s

95th percentile per-packet one-way delay: 279.743 ms

Loss rate: 0.79%

Run 3: Report of TaoVA-100x — Data Link

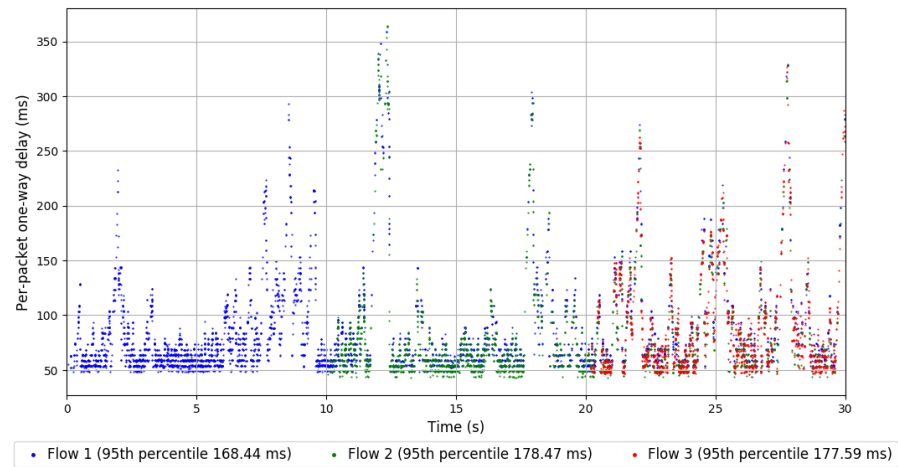
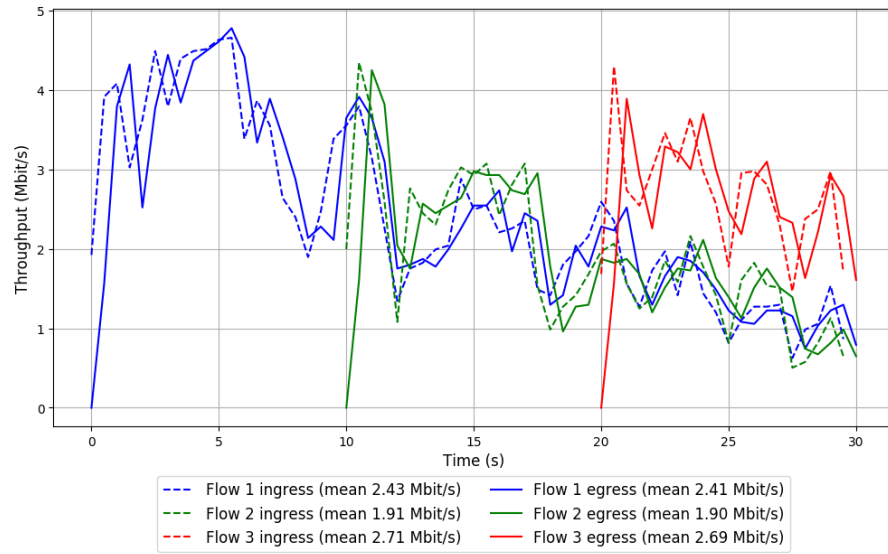


Run 1: Statistics of TCP Vegas

Start at: 2018-06-29 19:31:11
End at: 2018-06-29 19:31:41
Local clock offset: -1.171 ms
Remote clock offset: -3.521 ms

Below is generated by plot.py at 2018-06-29 20:24:36
Datalink statistics
-- Total of 3 flows:
Average throughput: 4.57 Mbit/s
95th percentile per-packet one-way delay: 173.775 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 2.41 Mbit/s
95th percentile per-packet one-way delay: 168.438 ms
Loss rate: 0.27%
-- Flow 2:
Average throughput: 1.90 Mbit/s
95th percentile per-packet one-way delay: 178.468 ms
Loss rate: 0.35%
-- Flow 3:
Average throughput: 2.69 Mbit/s
95th percentile per-packet one-way delay: 177.586 ms
Loss rate: 1.11%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2018-06-29 19:49:51

End at: 2018-06-29 19:50:21

Local clock offset: 4.134 ms

Remote clock offset: -4.63 ms

Below is generated by plot.py at 2018-06-29 20:24:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.95 Mbit/s

95th percentile per-packet one-way delay: 155.468 ms

Loss rate: 0.09%

-- Flow 1:

Average throughput: 4.30 Mbit/s

95th percentile per-packet one-way delay: 140.050 ms

Loss rate: 0.05%

-- Flow 2:

Average throughput: 3.45 Mbit/s

95th percentile per-packet one-way delay: 146.765 ms

Loss rate: 0.16%

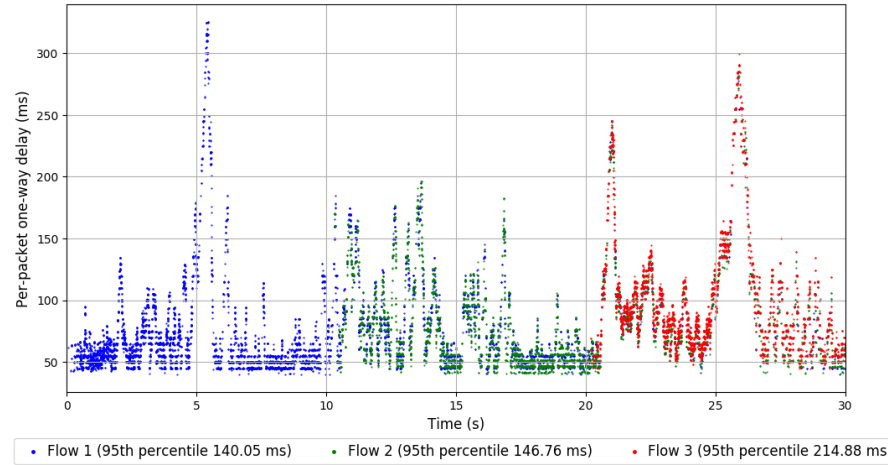
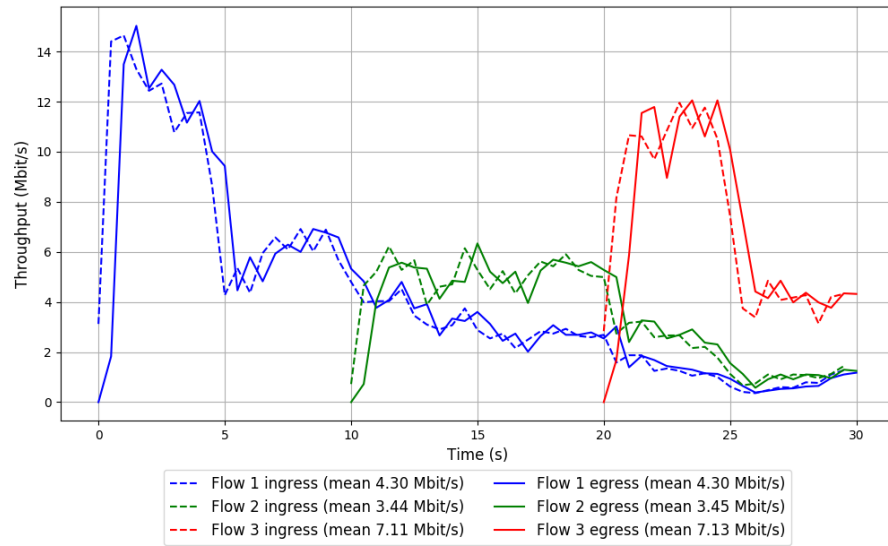
-- Flow 3:

Average throughput: 7.13 Mbit/s

95th percentile per-packet one-way delay: 214.875 ms

Loss rate: 0.08%

Run 2: Report of TCP Vegas — Data Link

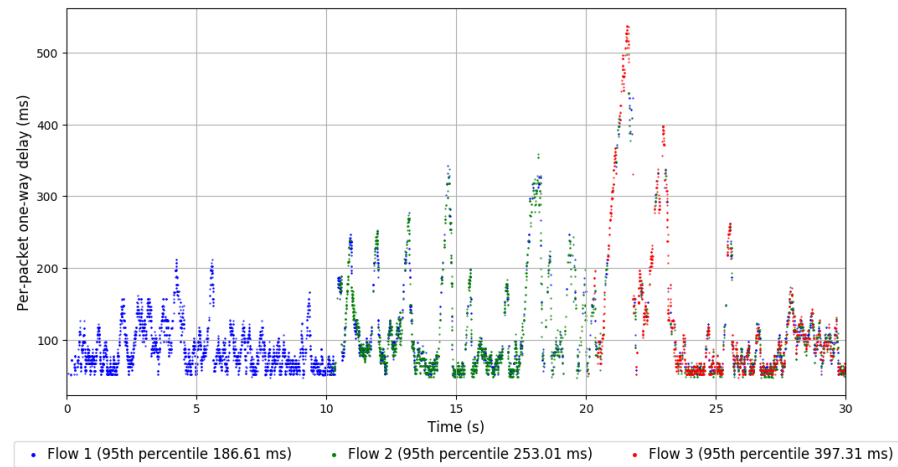
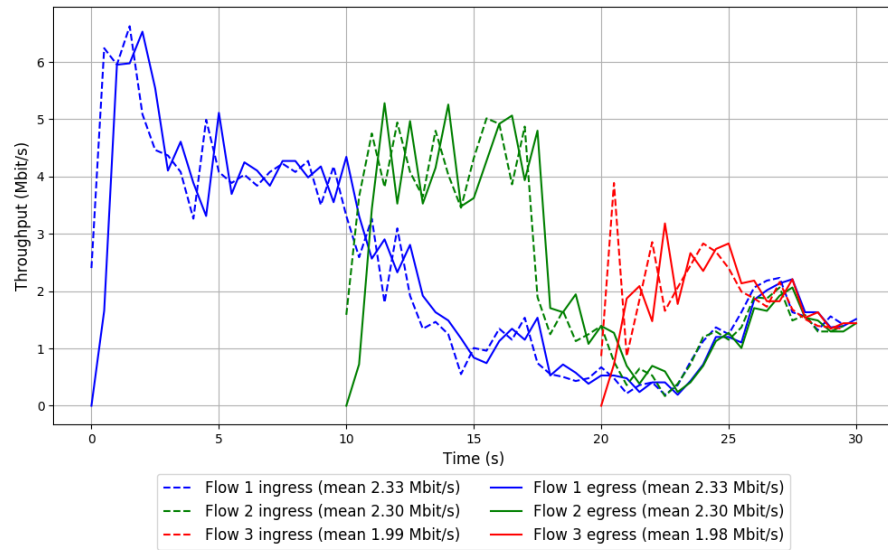


Run 3: Statistics of TCP Vegas

Start at: 2018-06-29 20:08:37
End at: 2018-06-29 20:09:07
Local clock offset: 1.277 ms
Remote clock offset: -8.091 ms

Below is generated by plot.py at 2018-06-29 20:24:36
Datalink statistics
-- Total of 3 flows:
Average throughput: 4.51 Mbit/s
95th percentile per-packet one-way delay: 238.649 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 2.33 Mbit/s
95th percentile per-packet one-way delay: 186.611 ms
Loss rate: 0.22%
-- Flow 2:
Average throughput: 2.30 Mbit/s
95th percentile per-packet one-way delay: 253.012 ms
Loss rate: 0.31%
-- Flow 3:
Average throughput: 1.98 Mbit/s
95th percentile per-packet one-way delay: 397.309 ms
Loss rate: 0.49%

Run 3: Report of TCP Vegas — Data Link

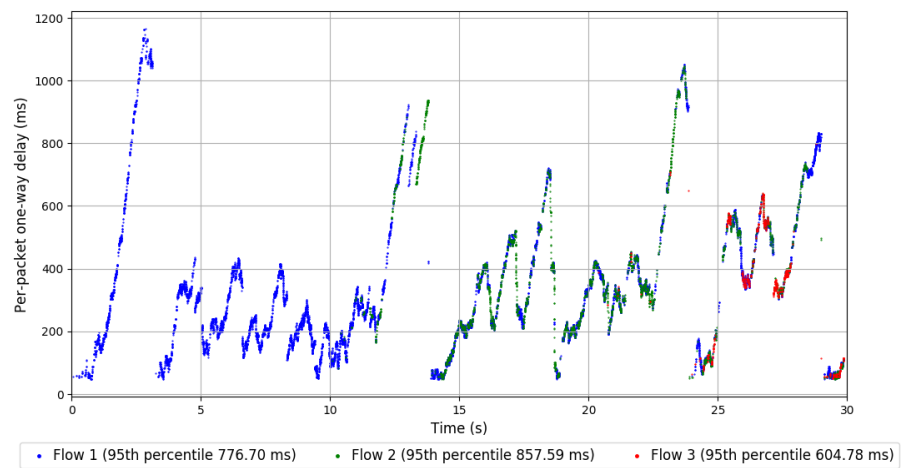
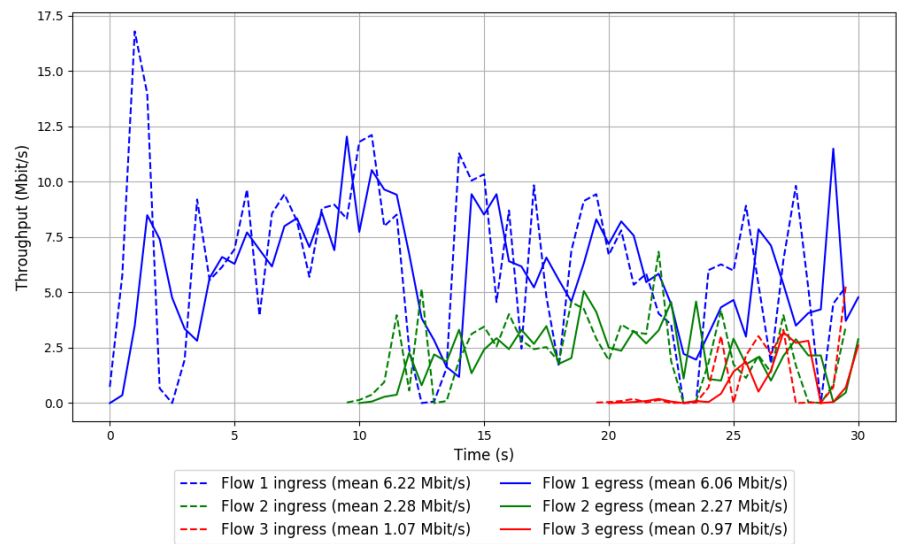


Run 1: Statistics of Verus

Start at: 2018-06-29 19:28:59
End at: 2018-06-29 19:29:29
Local clock offset: 3.102 ms
Remote clock offset: -2.794 ms

Below is generated by plot.py at 2018-06-29 20:24:36
Datalink statistics
-- Total of 3 flows:
Average throughput: 7.87 Mbit/s
95th percentile per-packet one-way delay: 793.879 ms
Loss rate: 3.00%
-- Flow 1:
Average throughput: 6.06 Mbit/s
95th percentile per-packet one-way delay: 776.702 ms
Loss rate: 2.86%
-- Flow 2:
Average throughput: 2.27 Mbit/s
95th percentile per-packet one-way delay: 857.590 ms
Loss rate: 1.25%
-- Flow 3:
Average throughput: 0.97 Mbit/s
95th percentile per-packet one-way delay: 604.783 ms
Loss rate: 12.91%

Run 1: Report of Verus — Data Link

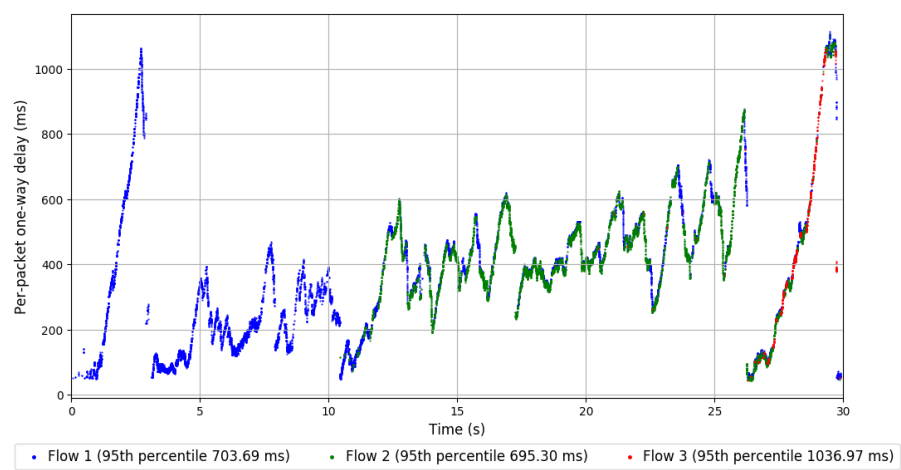
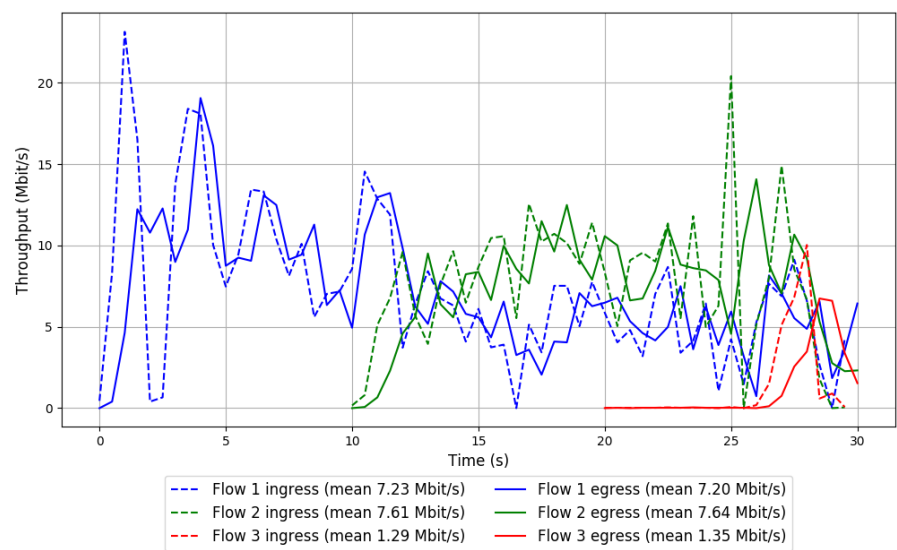


Run 2: Statistics of Verus

Start at: 2018-06-29 19:47:39
End at: 2018-06-29 19:48:09
Local clock offset: 2.653 ms
Remote clock offset: -3.703 ms

Below is generated by plot.py at 2018-06-29 20:24:41
Datalink statistics
-- Total of 3 flows:
Average throughput: 12.64 Mbit/s
95th percentile per-packet one-way delay: 724.114 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 7.20 Mbit/s
95th percentile per-packet one-way delay: 703.690 ms
Loss rate: 0.62%
-- Flow 2:
Average throughput: 7.64 Mbit/s
95th percentile per-packet one-way delay: 695.303 ms
Loss rate: 0.69%
-- Flow 3:
Average throughput: 1.35 Mbit/s
95th percentile per-packet one-way delay: 1036.975 ms
Loss rate: 0.28%

Run 2: Report of Verus — Data Link

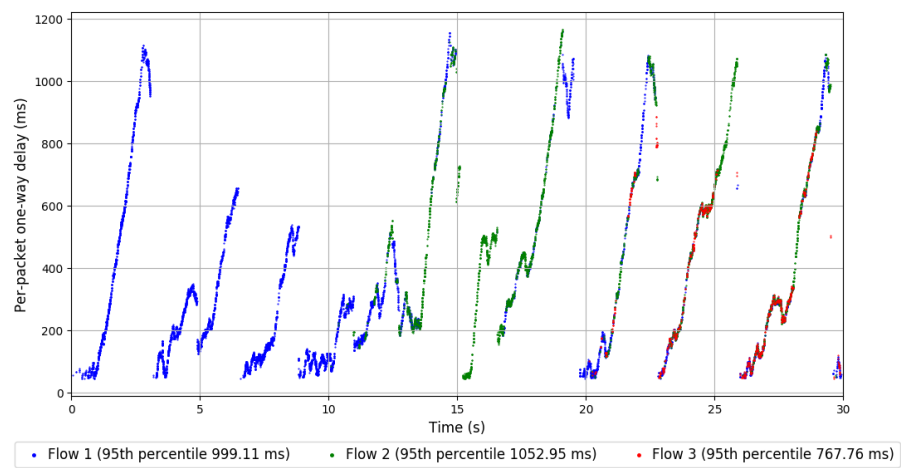
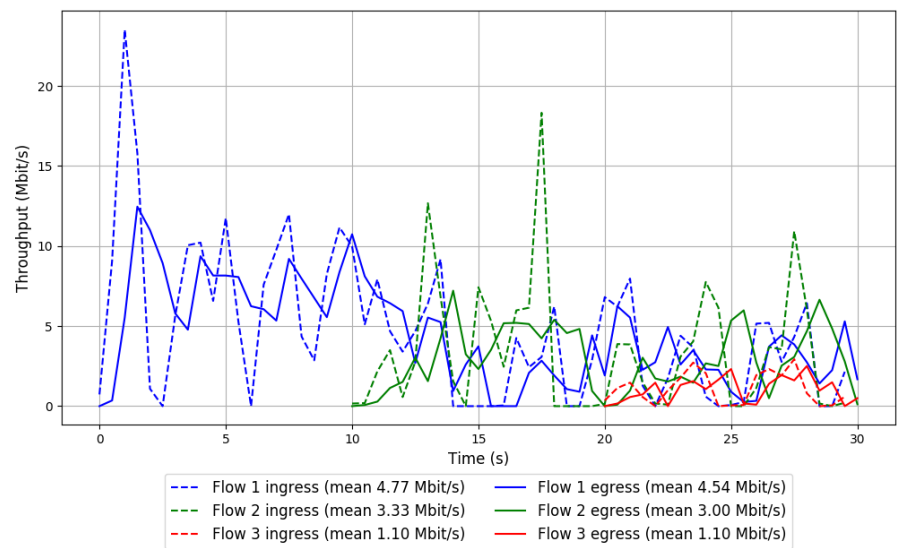


Run 3: Statistics of Verus

Start at: 2018-06-29 20:06:26
End at: 2018-06-29 20:06:56
Local clock offset: 1.67 ms
Remote clock offset: -7.009 ms

Below is generated by plot.py at 2018-06-29 20:24:41
Datalink statistics
-- Total of 3 flows:
Average throughput: 6.89 Mbit/s
95th percentile per-packet one-way delay: 1005.224 ms
Loss rate: 6.32%
-- Flow 1:
Average throughput: 4.54 Mbit/s
95th percentile per-packet one-way delay: 999.107 ms
Loss rate: 4.82%
-- Flow 2:
Average throughput: 3.00 Mbit/s
95th percentile per-packet one-way delay: 1052.954 ms
Loss rate: 10.42%
-- Flow 3:
Average throughput: 1.10 Mbit/s
95th percentile per-packet one-way delay: 767.762 ms
Loss rate: 0.98%

Run 3: Report of Verus — Data Link

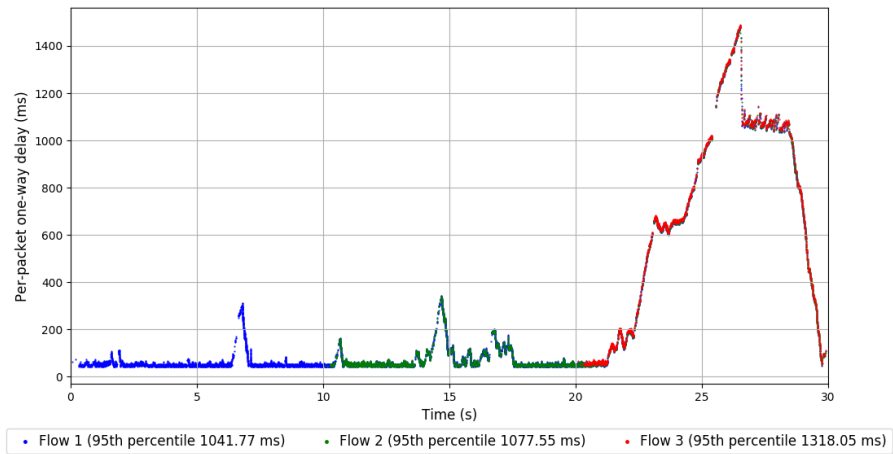
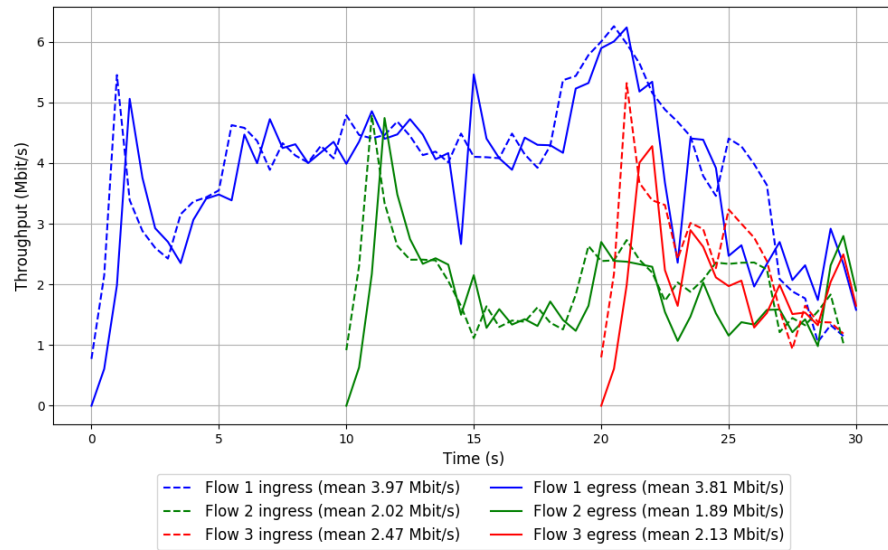


Run 1: Statistics of PCC-Vivace

Start at: 2018-06-29 19:38:52
End at: 2018-06-29 19:39:22
Local clock offset: 1.65 ms
Remote clock offset: -2.119 ms

Below is generated by plot.py at 2018-06-29 20:24:41
Datalink statistics
-- Total of 3 flows:
Average throughput: 5.76 Mbit/s
95th percentile per-packet one-way delay: 1072.492 ms
Loss rate: 6.09%
-- Flow 1:
Average throughput: 3.81 Mbit/s
95th percentile per-packet one-way delay: 1041.770 ms
Loss rate: 4.16%
-- Flow 2:
Average throughput: 1.89 Mbit/s
95th percentile per-packet one-way delay: 1077.545 ms
Loss rate: 6.81%
-- Flow 3:
Average throughput: 2.13 Mbit/s
95th percentile per-packet one-way delay: 1318.049 ms
Loss rate: 14.29%

Run 1: Report of PCC-Vivace — Data Link

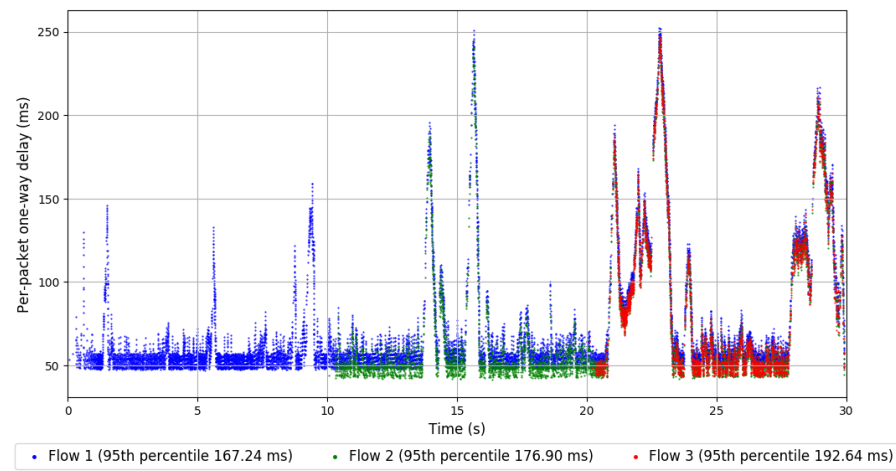
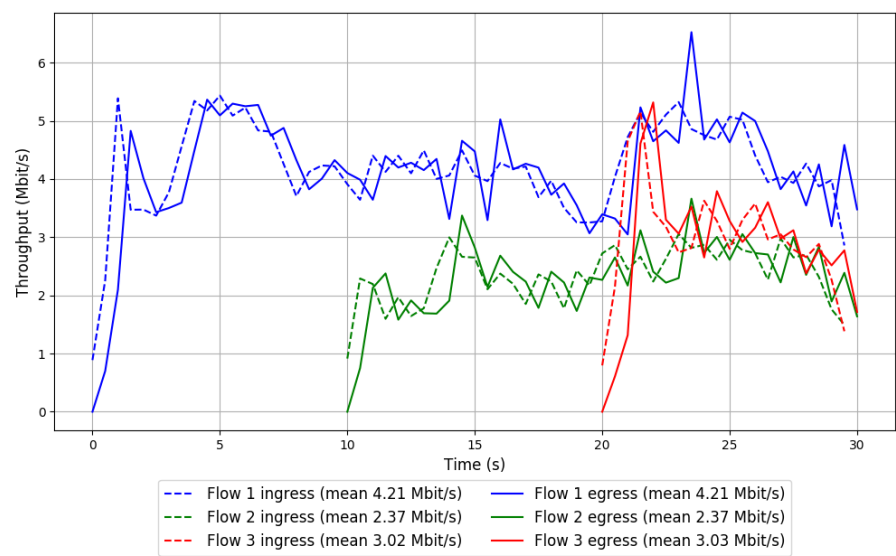


Run 2: Statistics of PCC-Vivace

Start at: 2018-06-29 19:57:33
End at: 2018-06-29 19:58:03
Local clock offset: 1.273 ms
Remote clock offset: -6.931 ms

Below is generated by plot.py at 2018-06-29 20:24:41
Datalink statistics
-- Total of 3 flows:
Average throughput: 6.78 Mbit/s
95th percentile per-packet one-way delay: 176.618 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 4.21 Mbit/s
95th percentile per-packet one-way delay: 167.243 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 2.37 Mbit/s
95th percentile per-packet one-way delay: 176.898 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 3.03 Mbit/s
95th percentile per-packet one-way delay: 192.636 ms
Loss rate: 0.16%

Run 2: Report of PCC-Vivace — Data Link

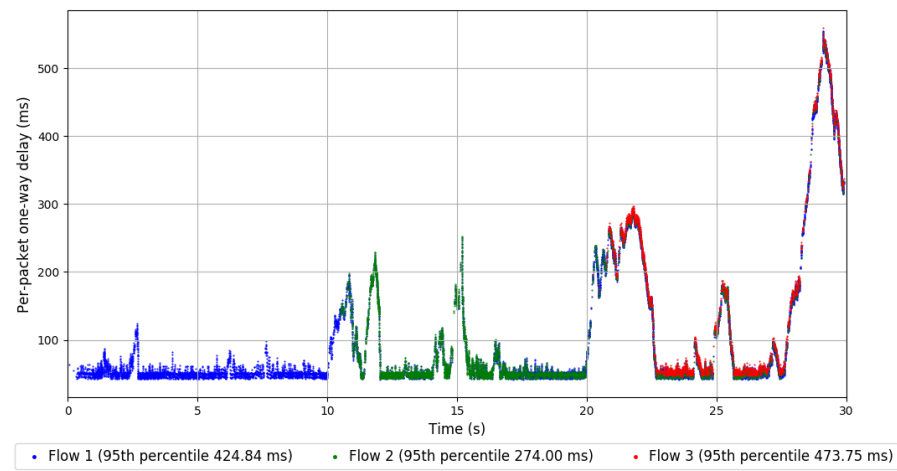
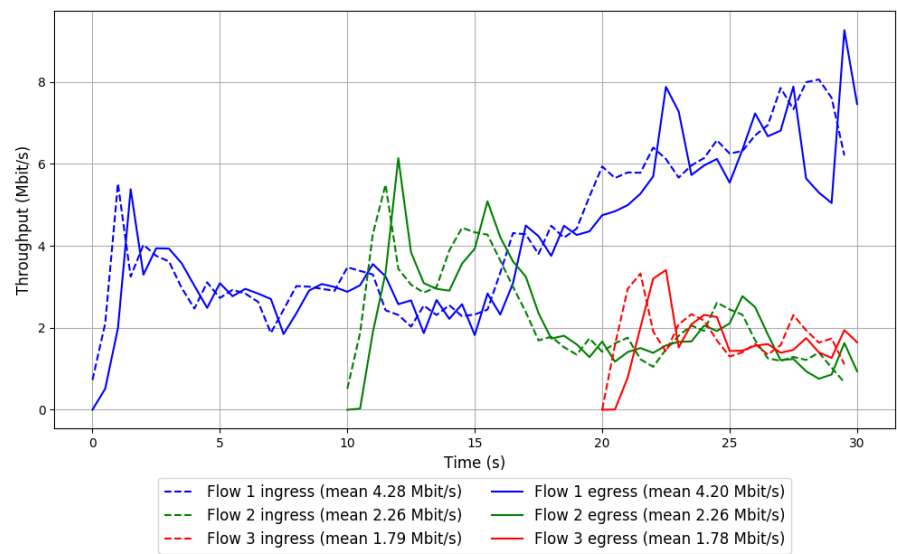


Run 3: Statistics of PCC-Vivace

Start at: 2018-06-29 20:16:18
End at: 2018-06-29 20:16:48
Local clock offset: 0.591 ms
Remote clock offset: -8.419 ms

Below is generated by plot.py at 2018-06-29 20:24:41
Datalink statistics
-- Total of 3 flows:
Average throughput: 6.27 Mbit/s
95th percentile per-packet one-way delay: 419.174 ms
Loss rate: 1.78%
-- Flow 1:
Average throughput: 4.20 Mbit/s
95th percentile per-packet one-way delay: 424.838 ms
Loss rate: 2.05%
-- Flow 2:
Average throughput: 2.26 Mbit/s
95th percentile per-packet one-way delay: 274.005 ms
Loss rate: 0.64%
-- Flow 3:
Average throughput: 1.78 Mbit/s
95th percentile per-packet one-way delay: 473.746 ms
Loss rate: 2.67%

Run 3: Report of PCC-Vivace — Data Link

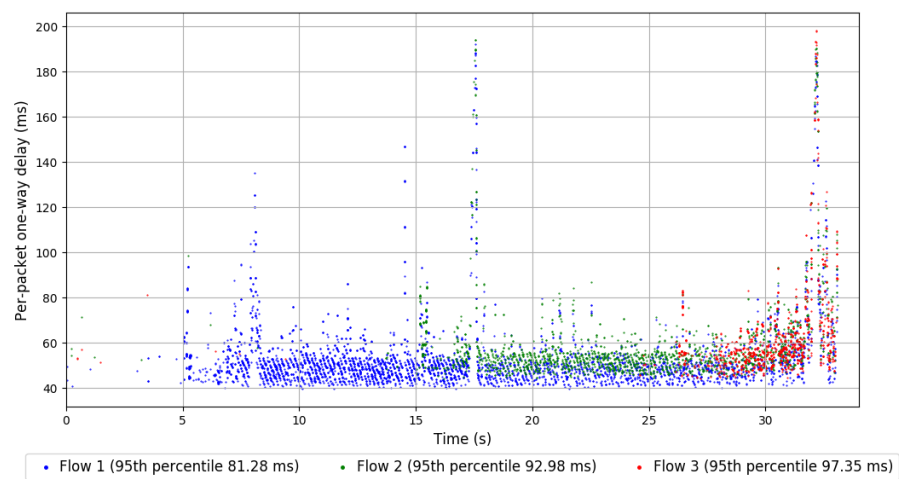
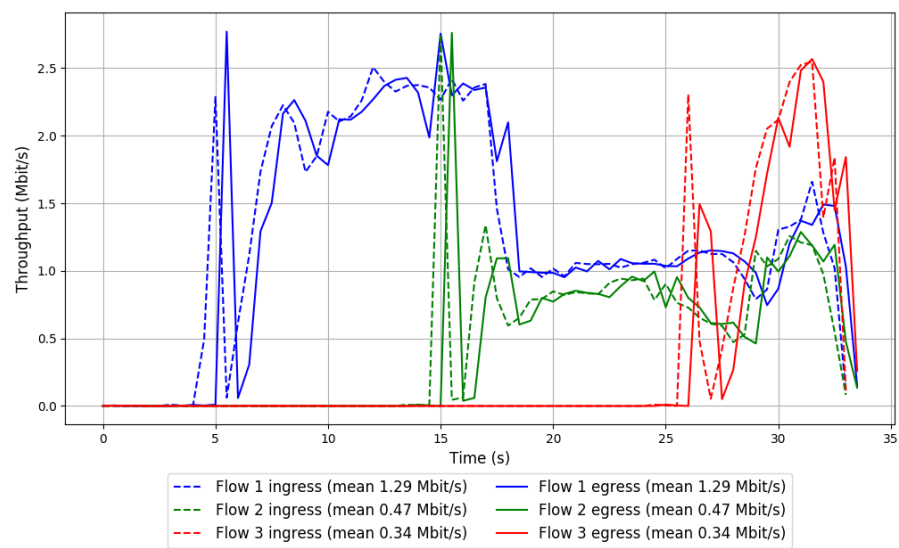


Run 1: Statistics of WebRTC media

Start at: 2018-06-29 19:33:23
End at: 2018-06-29 19:33:53
Local clock offset: 2.807 ms
Remote clock offset: -2.907 ms

Below is generated by plot.py at 2018-06-29 20:24:41
Datalink statistics
-- Total of 3 flows:
Average throughput: 2.09 Mbit/s
95th percentile per-packet one-way delay: 87.465 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 1.29 Mbit/s
95th percentile per-packet one-way delay: 81.281 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 0.47 Mbit/s
95th percentile per-packet one-way delay: 92.982 ms
Loss rate: 0.20%
-- Flow 3:
Average throughput: 0.34 Mbit/s
95th percentile per-packet one-way delay: 97.353 ms
Loss rate: 0.52%

Run 1: Report of WebRTC media — Data Link

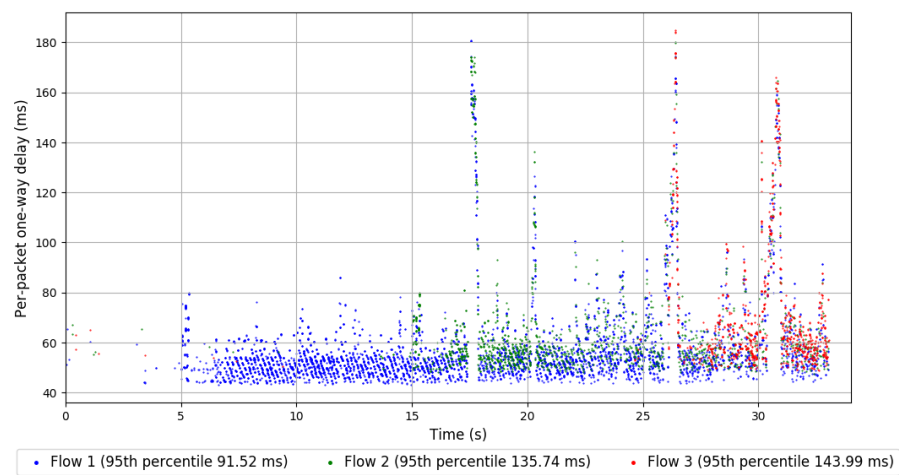
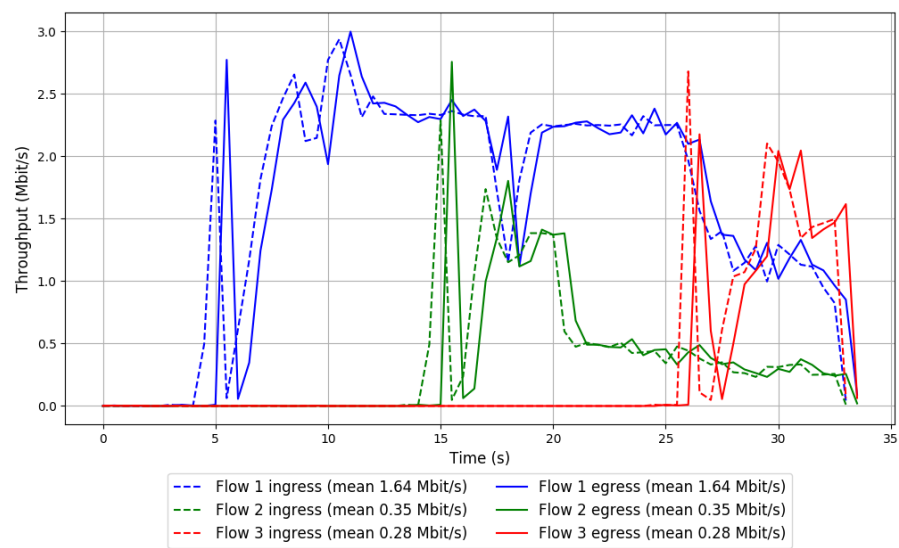


Run 2: Statistics of WebRTC media

Start at: 2018-06-29 19:52:04
End at: 2018-06-29 19:52:34
Local clock offset: -0.286 ms
Remote clock offset: -6.091 ms

Below is generated by plot.py at 2018-06-29 20:24:41
Datalink statistics
-- Total of 3 flows:
Average throughput: 2.27 Mbit/s
95th percentile per-packet one-way delay: 113.221 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 1.64 Mbit/s
95th percentile per-packet one-way delay: 91.516 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 0.35 Mbit/s
95th percentile per-packet one-way delay: 135.742 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 0.28 Mbit/s
95th percentile per-packet one-way delay: 143.986 ms
Loss rate: 0.51%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2018-06-29 20:10:49

End at: 2018-06-29 20:11:19

Local clock offset: 2.488 ms

Remote clock offset: -8.04 ms

Below is generated by plot.py at 2018-06-29 20:24:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.53 Mbit/s

95th percentile per-packet one-way delay: 101.438 ms

Loss rate: 0.29%

-- Flow 1:

Average throughput: 0.58 Mbit/s

95th percentile per-packet one-way delay: 86.875 ms

Loss rate: 0.05%

-- Flow 2:

Average throughput: 0.62 Mbit/s

95th percentile per-packet one-way delay: 134.443 ms

Loss rate: 0.12%

-- Flow 3:

Average throughput: 0.34 Mbit/s

95th percentile per-packet one-way delay: 92.800 ms

Loss rate: 1.00%

Run 3: Report of WebRTC media — Data Link

